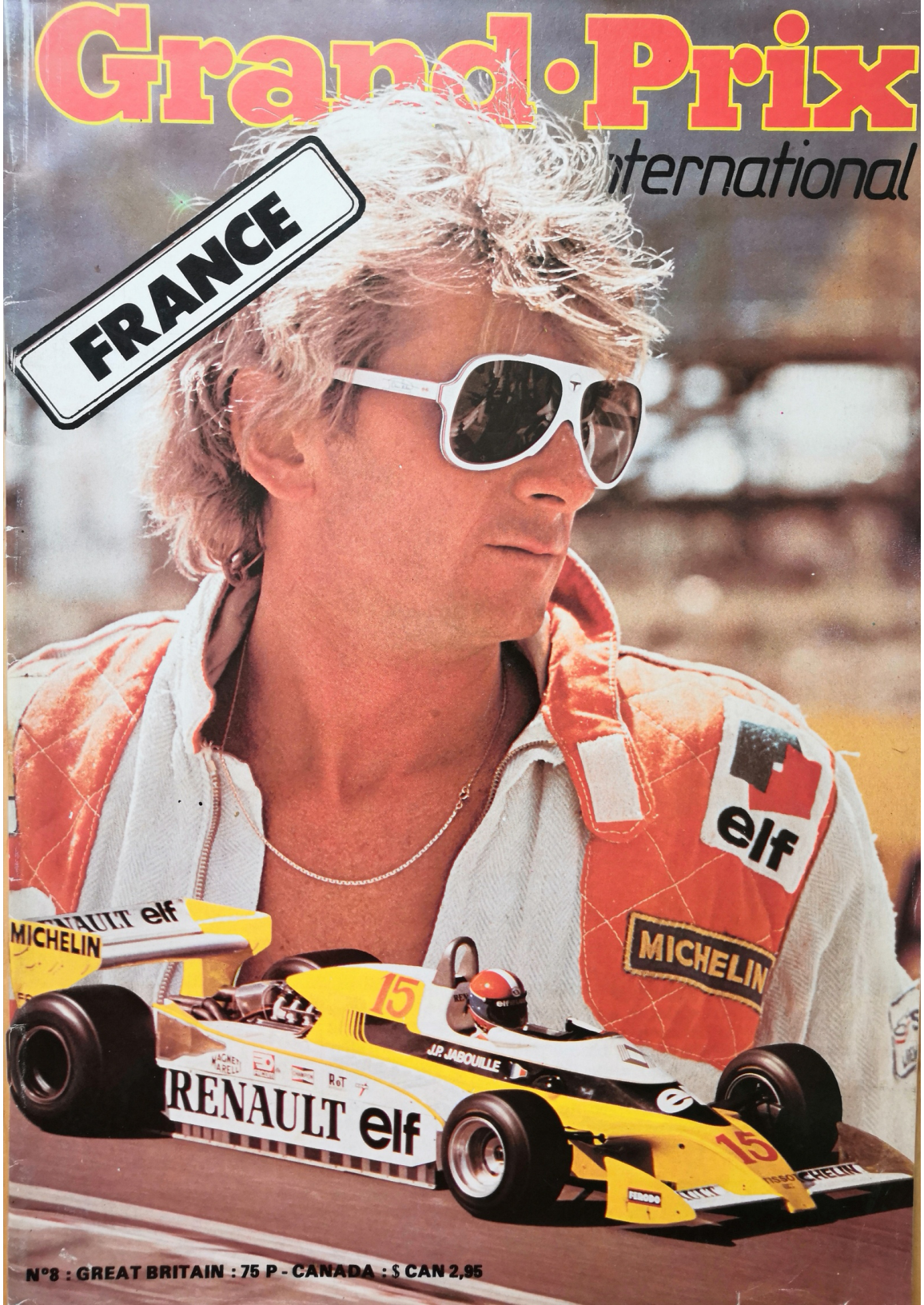
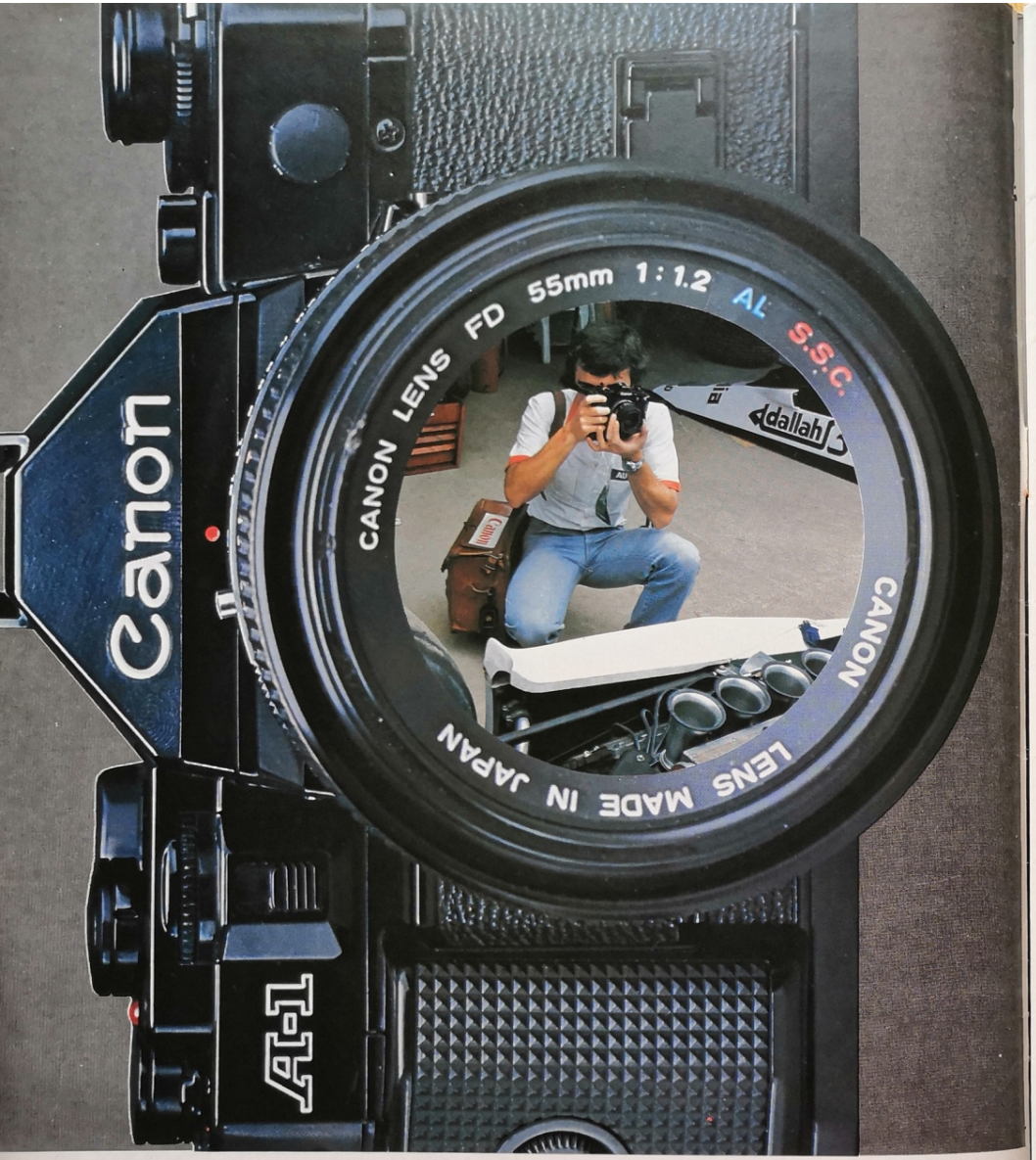
Grand·Prix

international

FRANCE



N°8 : GREAT BRITAIN : 75 P - CANADA : $ CAN 2,95



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IN THIS ISSUE

Page 7: while Renault's victory was historic, it must also be considered as logical. It's the realisation of progression.

Page 12: Jabouille at home in France. François Janin's portrait of the Dijon here.

page 42: Formula One exists on sponsorship. But why are there sponsors? What are their aims?

Page 4: the paddock at Dijon. **Page 16:** how the grid was won. **Page 18:** the film of the race. **Page 22:** Patrick Depailler's other battle. **Page 24:** postcard from Dijon. **Page 25 to 36:** the French Grand Prix in pictures. **Page 48:** lap by lap. **Page 50:** Dijon statistics. **Page 52:** Giogio Piola's technical article on the new Arrows A2. **Page 54:** Maurice Hamilton's feature on Maurice Phillippe. **Page 56:** the fantastic Villeneuve-Arnoux duel. **Page 58:** cocpits.

Our poster: Jean-Pierre Jarier's Candy-Tyrrell 009, fifth in the French Grand Prix.

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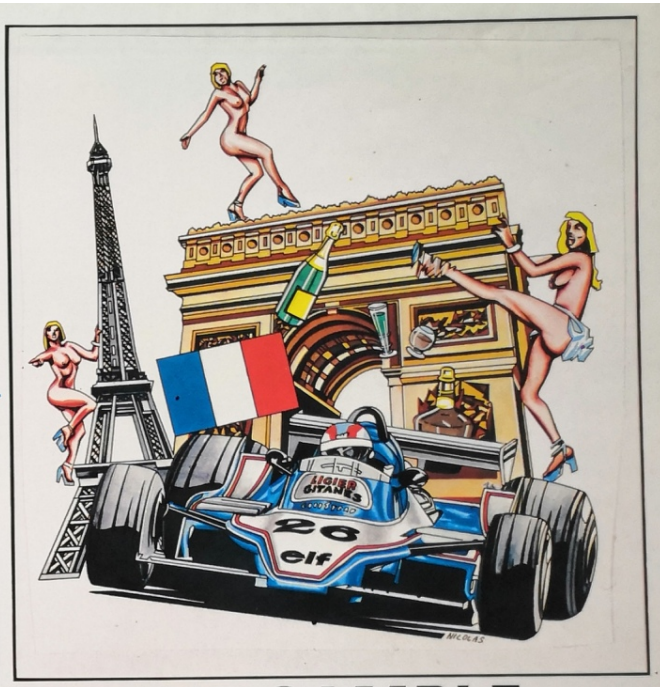
IS ONE SALE 10 DAYS AFTER EACH GRAND PRIX.



THE GAMBLE PAYS OFF

On the eve of the French Grand Prix, it seems that French radio announced that a miracle had taken place in the town of Lourdes. A man, paralysed, had arrived in his wheel chair, had been cured by mercy, and had left walking. At Dijon, on hearing this news, some wag remarked, "if that sort of thing continues, Renault will win tomorrow".

And Renault won. But should such a win be considered a miracle? That would be very unfair to Gérard Larrousse's team considering their work, perseverance and progress. On the other hand, the remark showed that some people still didn't believe that the turbo could win. That's because one had practically become used to seeing the Regie trying hard—but in vain— to gain reliability.

That time has ended, with all due deference to the sceptics. The turbo has finally succeeded in its goal, in a way that is irreproachable. The problem, on the evening after the Grand Prix, was not necessarily to wonder whether a turbo engine would now dominate Grand Prix racing at the expense of all other teams. What mattered, more than anything, was the happiness of a man, Jabouille, and the emotion of the team around him. In one fell swoop, two long years of effort and lack of success had been wiped out, leaving no doubt that the gamble had paid off.

GRAND PRIX INTERNATIONAL IS DISTRIBUTED BY SEYMOUR PRESS LTD : 334 Brixton Road-London SW9-7AG. Telex : 8812945 Seypress London. CHIEF EDITOR Eric Bhat. ASSISTANT EDITORS : Bob Constanduros. CONTRIBUTOR : Maurice Hamilton, Lionel Froissard. ARTISTIC DIRECTOR : Marc Tournaire. EDITORIAL SECRETARY : Régis Lacroix. ILLUSTRATIONS : Nicolas Géron. PHOTOGRAPHERS : A + P, Bernard Asset, Harald Strebelle, DPPI. Camera CANON. GRAND PRIX INTERNATIONAL is published by S.N.E.P. PUBLISHING DIRECTOR : Michel Hommell. ASSISTANT DIRECTOR : Gérard Lips. EDITORIAL ADMINISTRATION : 7, rue de Lille, 75007 Paris, Tél. : 260.34.65. ADVERTISING : Profil 18/30, 7, rue de Lille, 75007 Paris, Tél. : 260.34.65. COMMERCIAL DIRECTOR : Philippe Méchin. PHOTO SETTING : Typo-Elysées, Compotronic. PHOTOGRAVURE : RPM. DISTRIBUTED IN ITALY by : ME. PE. via Carcano 32 20141 Milano. Tel. : 02/8438141. DISTRIBUTED IN GERMANY : W.E. Saarbach GmbH 5000 Köln 1. Postfach 10 1810 Follerstrasse 2. Tel. : 0221/244631. Telex : 8881067. DISTRIBUTED in France by : NMPP. Distributed in Belgium by : A.M.P. 103, rue de la Petite-Ile, Brussels. DISTRIBUTED in Argentina, Brazil, South Africa, Canada, U.S.A., Holland. Spain, Switzerland, Sweden by : G.I.H. PRINTED IN FRANCE by : SARI, Montlouis, Clermond-Ferrand, SNIL/PPR. Commission Paritaire : 61611.

The paddock in Dijon

WHY DID ATS PULL OUT?

Hans Stuck had qualified. It may have been on the back row, but he was in all the same. Gunter Schmidt, the boss of ATS, nevertheless decided to pull the car out of the race.

Hans Stuck who had set the best time of the five teams that don't have goodyear favour, was destined to receive a set of qualifying tyres for the final qualifying session. The set were mounted on ATS wheels, and then taken off again, to be given to Lauda, and Stuck got another set. When he went out on the track, he noticed that one of the tyres was oval

Gunter Schmidt went into a fit of rage as only he knows how, and pulled out the car, promising that he would do everything he possibly could to stop Goodyear getting into Germany for the Grand Prix there.

KEKE RETURNS

After James Hunt retired, Walter Wolf and Peter Warr didn't take long to sign a new driver. At first they considered both Keke Rosberg and Derek Daly, but Warr was soon on a plane to the United States where Rosberg was racing in Canam and within a few days of Hunt's retirement, Keke was signed up as works Wolf driver. For the Finnish driver, it is a Grand Prix return, having last year driven the Theodore TR1 and a Wolf WR3, and then an ATS. Even if the Wolf drive hadn't been available, Keke was almost certain to get back into Formula One probably driving an ATS.

There are still rumours going round that Walter Wolf's interest in Formula One is waning. The first half season has done little to re-awaken it. The rumours go that Paul Newman, for whom Keke already drives in CanAm, may be tempted to take over the team.

MONZA: WORK

In spite of doubts cast last year, the Italian Grand Prix will take place next September at Monza, but the contract has been signed on condition that certain important improvements are made to the circuit. These are being made at the moment. Sixteen new pits are being added to the 32 currently in existence. In addition, a total of 408 trees have been cut down around the Curva Grande, the Lesmos and the Ascari chicane in order to make more run off area and mount the guard-rails a few yards further back.

COPERSUCAR'S F6 : COMPLETELY REDESIGNED

The British Grand Prix won't just see the debut of the new McLaren M29, it will also mark the reappearance of the Copersucar F6, which will also be virtually a new car. Designer Calliri has been responsible for the design work. *"Everything will be changed"*, confirmed Emerson Fittipaldi at Dijon: *"the front and rear surpension and the bodywork"*. In fact all that will remain of the original is the monocoque.

NOT A SHAGGY DOG STORY

When he was walking along the pits a few minutes before the start of practice, the loud-speakers announced "would the dog handlers please clear..." and what was to follow was drowned in the roar of a V8 that started beside him. His heart warmed at the sound of the eight cylinders. But then it froze. A large dog was straining at its leash in his direction, and its muzzle was making it no less menacing. The beast snarled, and the man in the green beret who was holding the animal yelled at our friend to get out. He closed his eyes and then opened them again. No, it was true. He was at Dijon-Prenois for the French Grand Prix. He took a last glance at the dog and dighed deeply.

DALY: "I WAS FED UP"

Ligier or not Ligier, Derek Daly has decided not to drive the Ensign again. Many factors influenced his decision, which he explained to us in Dijon. *"There was no way you could qualify the car. I wasn't driving in any Grands Prix, so I wasn't getting any Grand Prix experience. And now trying to qualify for Grands Prix has meant that I've got little chance of winning the Formula Two championship. On top of that, my financial contract wasn't adhered to. So I've decided to stop driving in Formula One and concentrate on Formula Two.*

– What was the atmosphere in the team Like?

"Not very good, no. Chuck Jones, Mo Nunn's co-director said I wasn't doing the job properly, and he thought I should get out. It really annoyed me to see someone who knows nothing about race driving telling me how to drive. And Mo Nunn thought I drove the car too hard and criticised the handling too frequently. But what could I say? I never did any testing. The new Ensign has been out three times. And each of those three times it's been considerably modified. It's not possible to set up a car without some testing. Everrything was getting worse and worse."

– Was it a mistake then to do Formula One instead of going for the Formula Two championship.

"It's easy to be wise after the event. I didn't know how things were going to turn out. But now I've got to win in Formula Two. I've got to win again so as to get another Formula One drive. I'll be back in Formula One again, but first I've got to win some Formula Two races. I know that Ducarouge wanted me to drive the second Ligier, but that didn't happen for political reasons. But there'll be another chance."

WASHING IN RECORD TIME

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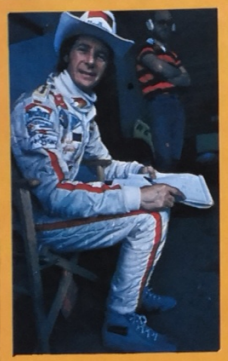


DALL'ARA HELPS OUT MERZARIO

Azturo Merzario and his team left the Dijon circuit only a few minutes after Arturo's non-qualification had been announced. They wanted to get back to Italy as quickly as possible in order to finish the next Merzario. It will be the first real wing-car for the Italian driver-constructor and will primarily feature a central fuel cell. The front and rear suspension have been designed by Dall'Ara, known in Formula One for having worked with Frank Williams. That was

at the time that Williams was running the Iso cars, and Dall'Ara was involved at the time when Arturo was driving them. The new car will have a shake-down run at Monza before setting off for Silverstone and the British Grand Prix. So Arturo will still be in the field.

MCLAREN : THE M29 AT SILVERSTONE

Teddy Mayer made an official announcement in Spain that McLaren were starting work on their M29, destined, as soon as possible to replace the ill-conceived and uncompetitive M28, despite various attempts to improve and develop it with B and C versions. Mayer's men have been working hard, and the first M29 will be seen at Silverstone and driven by John Watson. Patrick Tambay will get the second M29 at Hockenheim for the German Grand Prix. In the English-based team they say that the car will be simple and light, reminiscent of the Lotus 79, Tyrrell 009 and the Williams FW 07. The car is eagerly awaited by the whole team who are working day and night to get the car ready. That's the case to such an extent that Alistair Caldwell wasn't in France for the Grand Prix, he was back at the workshop putting finishing touches to the first M29 monocoque.

PROCAR: PIQUET DOMINATES THE SHOW

In his war against Bernie Ecclestone and the FOCA, Jean-Marie Balestre has just lost a point. The FISA president (also president of the FFSA) was against the Procar race taking place at the French Grand Prix. Bernie Ecclestone replied with a straightforward statement. *"FOCA comes complete with Procar or not at all."* Finally, Balestre had to concede to his stern statement and the race FFSA liked to call it. It was one way of playing with words.

Balestre, in his own way, admitted that he'd just lost a battle, but not the war. *"We've just been subjected to the greatest scandal ever to exist in Formula One: the constructors have used blackmail in order to help a commercial enterprise. They've gone a little too far. I promise you, there are going to be a lot of changes soon to clean up the situation."*

— You keep promising that something will happen and we don't see anything.

"Wait a moment, I've only been president for five months."

The race itself wasn't as exciting as that at Monaco a month ago. Starting from pole position, Piquet was never really challenged followed at a distance throughout the race by Jones and Pironi. The struggle for fourth place was the really interesting battle. Beltoise overtook Lauda, Stuck and Surer on the first lap when Regazzoni delayed them and tried to catch Regazzoni who recovered in fourth place. But Beltoise's tyres were going off which allowed Surer to overtake him having followed him closely. The Swiss driver then caught his compatriot Regazzoni and took fourth place off him a couple of laps from home. So Piquet won from Jones, Pironi, Surer, Regazzoni, Beltoise, Stuck and Lauda.

ENSIGN: IT'S GAILLARD

As soon as he learnt that Derek Daly had left his team, Mo Nunn began to look for a new driver. South, Kennedy, Needell and Gaillard were all contacted. South was Nunn's first choice but after a test session South dediced against it, having recently signed a contract with ICI for Formula Two. So the drive went to Gaillard who was allowed to drive (he wasn't on the FISA list of replacement F1 drivers) thank to his Formula Three and Formula Two results. As the president of FISA is French, it rather angered the English that a Frenchman was allowed to drive as Needell wasn't able to get the same licence.

For Gaillard, even though he hasn't taken over the best car on the grid, it's an unhoped for opportunity. He's only driven three races this year. Thanks to our sister magazine Auto Hebdo, he's done three Formula Two races in a Chevron. And it's without doubt that his fifth place at Pau and fourth at Hockenheim influenced Mo Nunn in his decision to the take the 27-year-old Frenchman.

SEITA took their time in deciding. Without doubt, their number one choice was James Hunt who had contacted Ducarouge have announced to the whole world and to Wolf that he was retiring from Formula One. James was disappointed with the WR7, and decided to pull out in a spectacular by abrupt way, but perhaps he was also tempted by the opportunity of driving the Ligier JS11. The French constructor saw him as a driver who could challenge the Ferraris, and also help Jacques to win the World Championship. The Wolf team didn't formally object to the move, but Ligier didn't want to sign Hunt without Walter

LIGIER MATTERS

Patrick Depailler's hang-gliding accident left a vacant seat in the Ligier team, and as you can imagine, there were a lot of applicants for the job. The list of pretenders was impressive to say the least. Hunt, Daly, Ickx, Leclere, Beltoise, Pescarolo, Jaussaud, Prost, Trimmer, and Keegan (we may have forgotten some) were all trying to take over until Depailler was ready to drive again.

Ligier, Ducarouge and the Wolf's written consent. Neither James nor Ligier were able to obtain it. So the best English driver left the scene in a typically unexpected way, the kind of way that he had conducted his whole career. As it wasn't possible for Hunt to run beside Laffite in the Ligier team, they were still left the problem. Ducarouge was in favour of signing Derek Daly, who had just left Ensign, but the directors of SEITA preferred Jacky Ickx, an experienced driver and a French speaker.

RENAULT-JABOUILLE : THE HARVEST HAS STARTED

Now they believe that it's true. For the first time in two years of Formula One, the Renault team started a race a race with the impatience and anxiety which precedes a race which could be successful. A win was in sight, a win that would confound two sorts of doubters : those who didn't believe in the turbo engine, and those who didn't believe in Jabouille. But together, they won the French Grand Prix.

by Eric BHAT

A year ago almost to the day before they won at Dijon, Jean-Pierre Jabouille was at the height of dispair. One lap, just one lap was all he covered in the 1978 French Grand Prix before his engine let him down. Jean-Pierre returned to the pits with a plume of white smoke from the engine which the Formula One world was beginning to associate with his car.
The 1.5 turbo engine, at least consistent, had once again disappointed. Jean-Pierre got out of the car without saying a word. You just had to look at his expression to know what he was thinking. Another pitiable appearance, even though the Renault team by now had a whole season's experience in Formula One, meant disappointment for Jean-Pierre. Even he was beginning to be outspoken about his chances as he surveyed his record. Two weeks later, before the start of the British Grand Prix, he didn't believe he had a chance. « *I know what's going to happen* », he said. « *I'm going to do 15 laps, and then boom...* ». Even though he did rather more laps (46) than he thought, he still retired for the same reason. He was losing hope. « *I didn't think we were ever going to finish* », he remembers. The fact is that the Renault team were suffering defeat after defeat in their double quest for performance and reliability. Jabouille, whose racing record had been allied to Renault's for ten years, was beginning to find that it was a long time. His confidence, unshaken for so long, was beginning to ebb day by day.
It was in this state of mind that Jean-Pierre arrived at Hockenheim for the German Grand Prix. It was a sweaty three days at the German circuit, during which Jean-Pierre again had engine trouble. But this time, at least he had a smile on his face.

« *We've now found the source of our problems* », he explained. « *It's because the air admission temperature is too high* ». So the engine development team, under Francois Castaing and Bernard Dudot knew in which direction they had to work. And everything got better, to such an extent that Jean-Pierre qualified twice on the second row of the grid (Austria and Italy), and took his first World Championship points by finishing fourth at Watkins Glen.

LIKE A LOTUS 79.

The scene changes to Dijon, Saturday morning. Jean-Pierre arrives early at the circuit. He's bouncy, more so than usual, jumping up and down, exercising his arms, more lively. The previous afternoon, he'd set the fastest time in official practice. Without actually admitting it, he seemed to scent success.
The situation had certainly changed during the year. Jabouille arrived at the circuit scenting victory. His spirit had been restored, he seemed to realise that the end was in sight, he knew that it was all going to turn out right. Talking to Pierre Blanchet in the still almost empty paddock, Jean-Pierre spoke of his hope. « *I can tell you, my car is superb* ». The Michelin man smiled : « *well, to do your time yesterday, you couldn't have braked much* ».
« *That's true, to go quickly here, you mustn't brake much. But the car is going really well. In some corners, it feels so good that I think I could overtake the others round the outside. An you know what that reminds me of ? The Lotus 79 last year. I'm not that much ahead of the others, OK, but the car seems to be as stable and as good* ».
Jabouille's optimism is well-founded. During the last timed session, he improved his time and was on pole position for the second time in his career following kyalami last March. Rene Arnoux too did well, getting onto the front row for the first time in his Formula One career, although not without drama. His car was stuck in the pits during the last session with a broken valve spring, and Rene watched practice like a cat on a hot tin roof. He watched anxiously from the pit rail as Gilles Villeneuve tried to whittle away those tenths of a second that would put him on the front row and Rene on the second. The Canadian was really trying hard, and Rene was spell-bound. The last ten minutes seemed to him like centuries.
« *It's his last lap, he's going to stop* », repeated Rene hopefully every time the Ferrari passed. But Gilles kept going. The little driver from Grenoble lant over to look at the watches his wife was working. But his time still held. When the chequered flag signalled the end of practice, Arnoux was delighted : Villeneuve hadn't pushed him off the front row. It was only Saturday, but already Renault had something to shout about.

FROM ONE EXTREME TO THE OTHER.

Only one month before, Jabouille and Arnoux had started from the back row of the grid at Monaco. Larrousse's team had caught up spectacularly by going from one extreme to the other, but Gerard and his associates, while perhaps not daring to suggest that RS11 and RS12 would dominate the front row completely, suspected all the same, that they were in with a good chance. « *Few people noticed that at Zolder and Monaco, without the inherent problems of a new car, we were really competitive* », said Francois Castaing. « *After ten minutes of practice at Monaco, Arnoux was among the quickest. Jabouille and Rene had only done a few laps, but they were very pleased with their cars'handling. The testing that we did at Castellet prior to Monaco proved to us that the cars were good. All that we had to do was improve reliability. Since then we haven't made any great changes because the cars were already quick. We simply tidied things up. For example, the wheel studs broke up ; we strengthened them. The exchangers were cracking ; we redesigned them* ».
Castaing was speaking calmly, as though the goal of reliability had been reached easily and naturally. It was methodical, yes but also taxing. One of the Renault mechanics said on Saturday afternoon at Dijon : « *we've been working harder in June than if the Swedish Grand Prix had taken place. There was no question of a holidays. I can assure you that I'm exhausted* ».
Apart from improving reliability, the Renault team had also built a third monocoque for Rene Arnoux and undertaken an exhaustive testing programme.
Modifying parts isn't good enough, you have to test them to make sure they're up to the job, and to see if they provoke further problems. So the new Renaults had two long test sessions at Dijon during which they covered 180 laps each time (about 900 miles in total). « *During these two sessions* », explained Castaing, « *we organised a simulated Grand Prix. The cars were meant to cover the Grand Prix distance on each occasion. The first effort showed up various small problems, such as friction in various places, but Jean-Pierre covered the distance. The second time it went well. We cut the distance short because the tyres we'd chosen weren't hard enough, but we had no mechanical problems at all* ». So it seemed that

→

the reliability goal had been reached. The Renault team were ready for the French Grand Prix. Jabouille and Arnoux were thus using cars capable of winning. Jean-Pierre knew it : « *the times were good, I was a little faster than the Ferraris on similar tyres. The car was reliabile. For the first time I was able to say that things were OK.*

ENGINE AND CAR : WORKING WELL

Suddenly everything had gone well. All of a sudden everything had turned out right, despite the new ground-effect car and the new double-turbo engine, the two were working well together. « *The ground-effect was working well and hugged the ground well* », Jabouille thought. « *The double turbo meant that the rev range had increased by around 2000 revs. The two together comprised a competitive car* ». Castaing confirmed it. « *Reliability was improved in one bound by using the twin turbo. It could have been the opposite, in which case we would have had to start from scratch to sort out the new engine. But in fact this reliability is almost logical : the 1.5 litre engine takes the boost better because less is asked of it, or at least, the boost is less brutal than with the single turbo* ».

And Jabouille adds : « *I don't think that the engine is everything. In a straight line, I'm not that much faster than the Ferraris. I've got about 2 1/2 mph advantage. But the RS10 is an excellent wing car. With a single turbo, I've no doubt that I would be nearly as fast* ».

Without doubt he'd add to these comments that the Renault wing car is efficient in its ground-effect job, and thus handles better, without sacrificing straight line speed. Gilles Villeneuve certainly thought so after practice for the French Grand Prix.

« *I followed Jabouille for a while. He wasn't going that much quicker than me on the straight, but the car was very stable in the corners* ».

The Dijon circuit was perhaps favorable to the Renaults. Fast curves are followed by straights ant that meant that the Renault's power and ground effect was put to good use.

THIS ONE OR THE NEXT

Gerard Larrousse wore a big smile on Saturday evening. Like Jabouille, he was showing optimism. It was a good sign. By nature, Gerard is reserved, so such an attitude is rare. But he had to smile at least : two cars on the front row for the French Grand Prix, that was already a fine achievement. « *Above all* », insisted Renault's director of competitions, « *apart from Rene's problem this afternoon, we've had no problems. Jean Pierre has spent as much time on the track as anyone. So we've already shown some progress. The team have already achieved a certain amount of maturity by being able to prepare two indentical cars, whereas six months ago, we couldn't really prepare one. After Monaco, I said that we had not only the technical potential to obtain good results - even win - but the human potential.*

These elements have been apparent in the team for the past two week. We've made regular progress, and now it's got to bear fruit. If we don't win tomorrow, no problem, we'll win next time.»

It was overcast and windy at Dijon on the first July morning. Jabouille was patient, yet outspoken, he thought, finally, his day had come.« *However* », he admitted as he prepared for the race,« *I would have preferred it rather warmer. I'm a little worried that we won't be able to warm the tyres enough. In truth, they do all the work* ». Jabouille hoping for warmer weather would have been treated as a joke a month or two before. His confidence in the car appeared to be complete. Half an hour before the race, engine man Francois Castaing was wandering around the cars. « *How are you doing Francois ?* » It was an ordinary, salutory question deserving a brief reply. But the Frenchman made a face. « *Badly, I'm not OK, I've got stage-fright* ». The whole team felt the same.

But Jabouille and Arnoux made it all worthwhile, taking first and third places. Jabouille's victory can be divided into three distinct parts, on which he commented after the race.

1 - Villeneuve pulled away from him. « *Gilles went into the attack from the start. I thought it was a plot to get me to follow and wear out my tyres. But I looked after them instead. I let him go. If I hadn't have done so, I wouldn't have won* ».

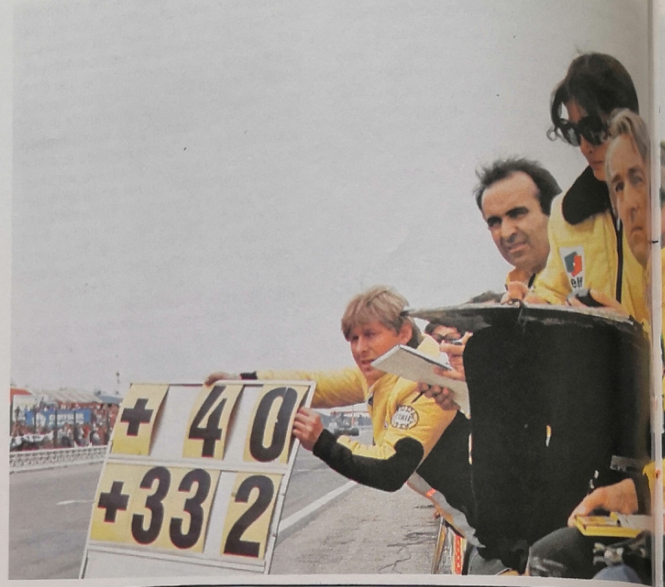
2 - Jean-Pierre caught up Villeneuve again, and then worried him « *But I wasn't certain that I could get by him. When I was right up his chuff, I was very much affected by turbulance. So I couldn't follow him too closely. I also got onto the kerbs. It was my only mistake during the race. Then I had a bit of luck : Gilles was help up by a back-marker and I was able to go through Pouas (a fast righthander into the straight) quicker than he. I was then in a position to pass him which I did at the end of the straight under braking* ».

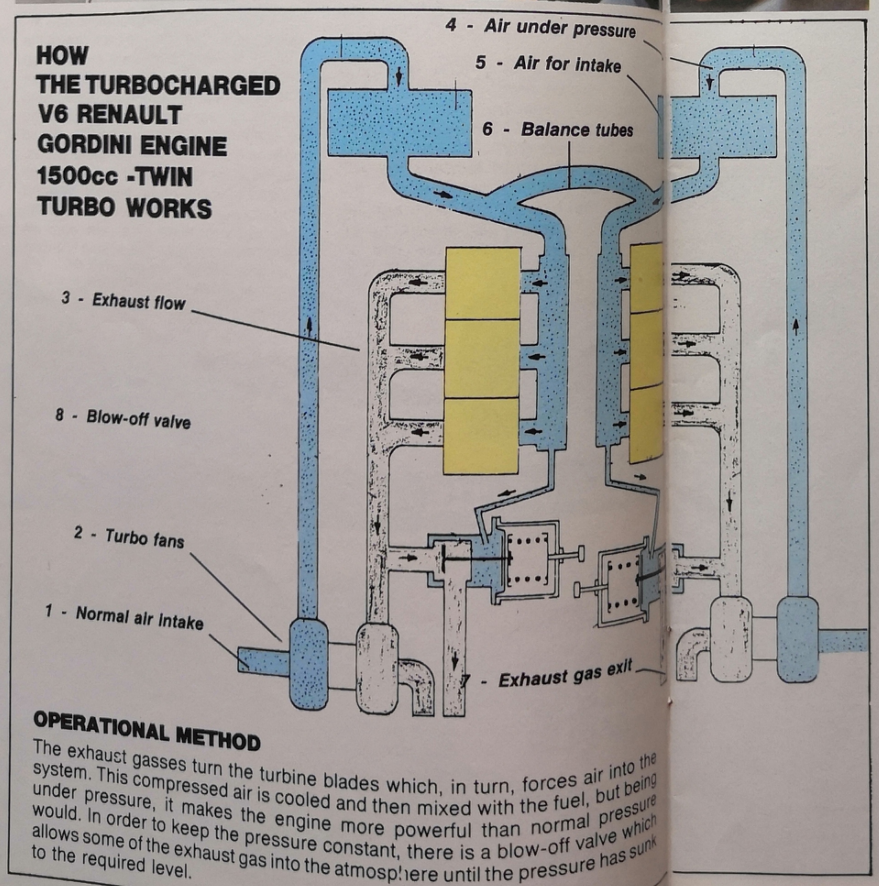
3 - Jean-Pierre then pulled away on his own. « *It was Michel Jazy, the former long distance runner, who gave me this advice : immediately you've overtaken someone, make him try harder. At that moment, he is at his most vulnerable, it's easier to upset him. That's how I pulled away from Gilles, but his tyres, it seemed, weren't working well. I didn't have any more trouble, apart from the brake pedal which became very hard, and meant that I had a slight pain in the hip. All in all, it was harder to win than I thought it would be* ».

Jabouille under-estimates the situation but it's interesting that the former Olympic Champion gave him this advice like a team manager a few weeks before. Jabouille makes light of the situation, as other jokers had done of him before, but certainly his Renault had quickly allowed him to re-establish himself.

After the race he was worn out, and didn't seemed to be veorjoyed immediately. But happiness was all around him. While the Marseillaise rang out, Larrousse stood apart in the shadows of the pit. There were tears in his eyes.

And we noticed, in the crowd around the car, the mechanic who the previous evening said he was exhausted. Today he'd forgotten his exhaustion. He was as happy as the rest. □



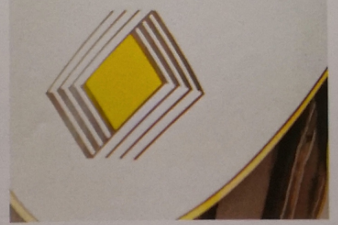


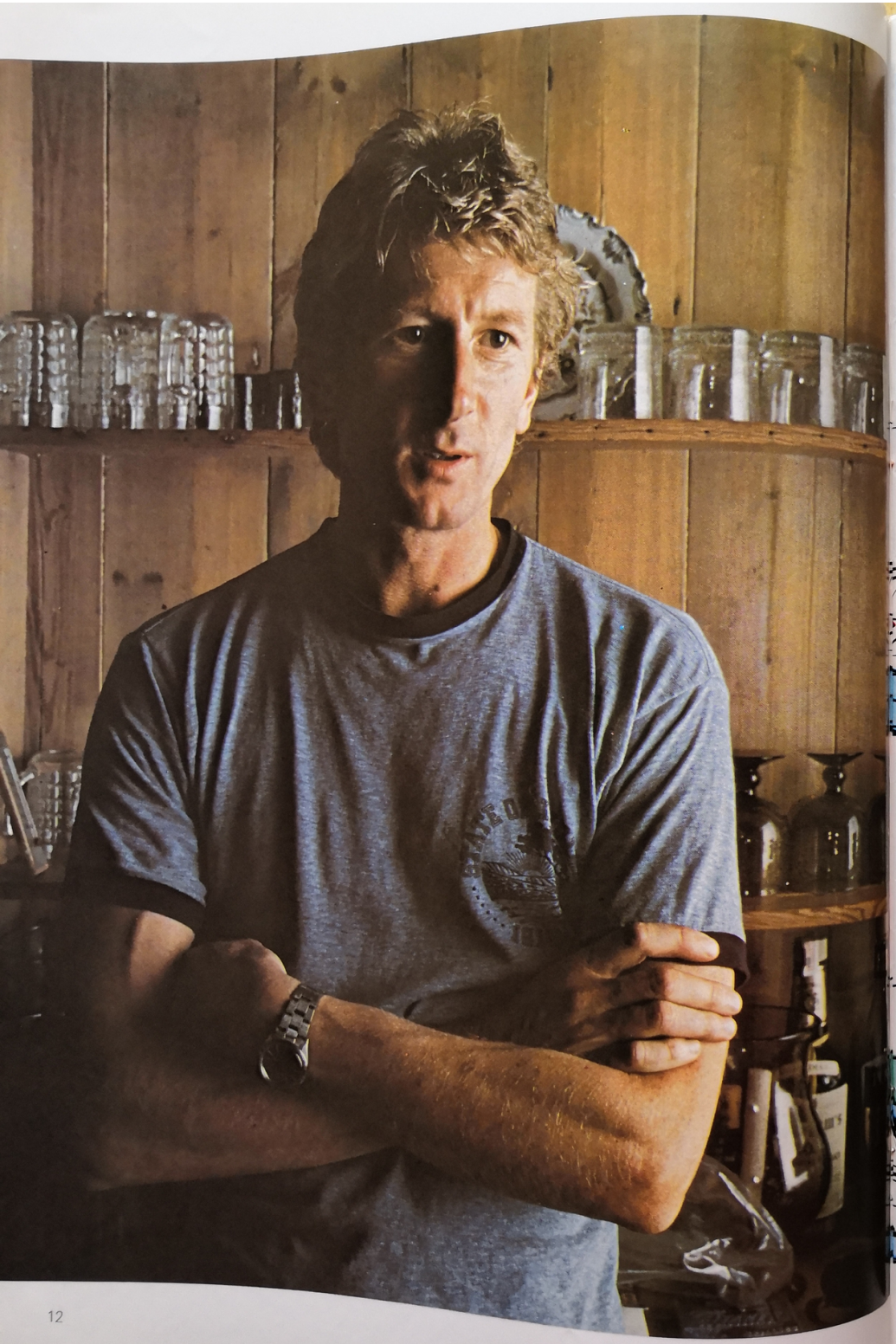
OPERATIONAL METHOD

The exhaust gasses turn the turbine blades which, in turn, forces air into the system. This compressed air is cooled and then mixed with the fuel, but being under pressure, it makes the engine more powerful than normal pressure would. In order to keep the pressure constant, there is a blow-off valve which allows some of the exhaust gas into the atmosphere until the pressure has sunk to the required level.

Anxiety before emotion in the Renault pit. But Jabouille has a good gap to the second man.

Rene Arnoux, a good back-up man for Jabouille: he's adapted to the turbo engine well.





Jean-Pierre Jabouille likes to slip back for a few days into his role of gentleman farmer, enjoying the rustic setting of his country house. The programme is sport, rest and relaxation. It's a certain way of life, one that is rare to Jean-Pierre nowadays.

THE BIG BLOND GUY WITH THE YELLOW CAR

He's 36 years old, a tall, broad, unemotional man who loves sport, open air and naturally machines. He draws, plays tennis, fisches. His favorite form of relaxation is his own paradise near Limoges, a farm hidden on a hillside above a village. The open air is his other world. He has to express himself physically, to expend energy. But the inner Jabouille is a tiger, driven on by cold, fierce, determination. It's this will that makes him a fighter of a driver. And neither years nor setbacks have dulled his confidence.

By Francois JANIN

It was Sunday, February 4, 1979, at the Hilton Hotel in Sao Paulo. A barbecue was beingheld around the swimming pool to celebrate Ligier's one-two in the Brazilian Grand Prix. The day's heros, Laffite and Depailler weren't there. There were already winging their way back to Paris by Concorde to be there early on Monday morning. The Ligier team were celebrating their win, but standing away from the crowd a little was a tall blond man who was just as happy for the team. When you understand that this tall blond man drives a yellow car, you'll realise that it was Jean-Pierre Jabouille, Jacques Laffite's brother-in-law and long time friend. But there was no sign of envy, none of jealousy on Jean-Pierre's face. He was happy for Laffite. On that Sunday evening in Brazil, no one had the heart to talk to Jabouille about the Renault Formula One car, so modest in terms of performance in comparison to Ligier six months ago.

It was Jabouille who took the initiative and spoke about his hopes.
Amid the laughter, the fuss, the party that took place under the Brazilian sky he spoke of the day that Renault's turn would come, later in the season, when he, Jabouille, would also win Grands Prix. He spoke carefully, seriously, with the precision with which he does everything. Jabouille explained that his forecast, his team's, so optimistic at the time, relied on basic analysis. First of all he spoke of their as yet unborn ground effect car, which was to win the French Grand Prix at Dijon on Sunday, July 1. He spoke six months ago that the Renault wing-car would incorporate all the most important factors concerning that type of car. He explained that research done at the aero laboratories in the college of Saint Cyr, where the aerodynamic studies were taking place, had given better results than any other of the current models in Formula One.

Jabouille was so sure of himself that one had to pay attention. His enthusiasm was contagious. He mentioned all the technical development that would go into the new car, in particular the future use of a twin turbo engine. And at roughly the same moment that the Ligier mechanics, in their light hearted mood, chucked some innocent Englishman into the pool, on that Sao Paulo night, six months ago, Jabouille uttered a few words which now have some signifiance : « *We'll be ready for Dijon* ». He was so sure of himself, Jabouille, that we took a bet. He went further : « *I'll win at least three Grand Prix this year* ». At the time you couldn't have made a better bet. We shook on it. The

deal was done. In February 1979, considering the Renault record, and their rash of problems, he had to be bit a mad not to admit defeat. After all, Jabouille, like others in the team, had had other fits of optimism which had come to nothing.
But Jean-Pierre Jabouille obviously didn't have blind faith in Renault's equipment. Unlike other drivers who utterly believe in their new replacement cars at the beginning of the season, Jabouille knew what he was talking about. For ever since he started driving for Renault, Jabouille has been involved with and utterly concerned with all the decisions and developments which have contributed to the Regie's success on July 1 at Dijon. He's a driver just the like the rest, but he's also the test driver, an engineer to some extent, a talented man, who gives his opinion on everything, and it is an opinion that is heeded. So the story from Brazil shows that while the win at Dijon might have been a surprise for many people in the world, it wasn't for Jabouille. He virtually predicted it six months before. He'll finally have won his bet if he can win those two other Grands Prix during the season. And why not ? There are still enough circuits on which the Renault and its turbocharged engine can accomplish what seemed impossible six months ago.

Tough, blond Jabouille was for a long time the least known of the French drivers. He had won the European Formula Two championship, but the publicity of those wins in Formula Two was nothing in comparison to his sudden rise to fame and now his win in a grand Prix. Equally, his driving capabilities weren't fully appreciated in France. Most people, certainly those close to racing, would say that his main talent was as a test driver and that his technical knowledge was of prime importance. But Jabouille has since proved that he is as good as the best in racing. In Formula Two and in sports cars he immediately showed that he could drive quickly, and of equal importance, intelligently. The way, for example, he took the European Formula Two championship at the final round at Hackenheim was utterly significant. All in all, the only thing that was missing was fame, or a win in Formula, as his final reward. You don't lend to the rich, that's obvious.

He's also had his disappointments. He did so much word on the Renault team cars, and so deserved to win last year's. Le Mans 24 Hours. Lady Luck decreed otherwise, and one can imagine just how Didier Pironi and Jean-Pierre Jaussaud felt when they won Renault's first major International victory. Even though Jabouille was happy for the team as a whole, within himself he must have felt a deep sense of frustation at having to retire when his car was in the lead.
Maybe all those disappointments were going through Jabouille's head during the French Grand Prix, all the time that Gilles Villeneuve was in front of him, and even more so when he'd overtaken him. How he must have so sensitive to the handling of the car, watching for and fearing the least sign of trouble, dreading some failure which would dash his hopes to nothing. At the same time, one could imagine just how he would have felt if his own car had broken, as at Le Mans, and the win had gone instead to his teammate Rene Arnoux.
Have a look at the world of Formula One these days. There's no doubt that Jabouille has as many qualities as any constructor could wish for. Formula One is a World Championship for Drivers - that's the main title - and rightly or wrongly you can say that drivers such as Clark and Stewart had that little bit extra that made them stand apart from other drivers. But these days the diffrence is made by the car and its tyres thanks to technical progress. The World Championship for Drivers is more a World Championship for Constructors. Naturally, the driver still has something to do with it as Jabouille demonstrated at Dijon, but a driver can't be a winner if he doesn't have a good car to use in the first place.
There's no doubt about the drivers capacibilities, but both Hunt and Watson have admitted that drivers these days are simply chauffeurs, the car does the work. That way one can imagine that Laffite or Jabouille might have World Champion last year in a Lotus, or that Andretti could have won the French Grand Prix if he was driving a Renault. Probably a dozen drivers, at least, have similar driving talent. Therefore it throws more importance on what takes place beforehand, in testing, setting up, the development, of the cars, at all of which Jabouille is a master for the Renault team. □

Fishing: a joint love of sport and the countryside.

Jean-Pierre and Geneviève Jabouille: serenity, far from busy circuits.

Two houses linked together for the Jabouilles and their friends, surrounded by 100 acres, a lot to look after. Jean-Pierre doesn't shirk the work though, it's just another outdoor activity.

HOW THE GRID WAS WON

During the first practice session, Jabouille put himself on pole position. From then on no-one could beat his time. The only threat came from his own teammate, René Arnoux, during the second session. But the number one Renault driver improved his time during the third session, keeping his advantageous starting position.

For heaven knows what reason, the organisers went back to the old system of qualifying with three officially timed sessions: an hour and a half on Friday morning, another hour in the afternoon, and a further hour on Saturday afternoon. The previous system, used since the Long Beach race, was to time just two sessions of an hour and a half each. Theoretically, this system should be readopted for the British Grand Prix.

Friday morning: the Renaults in front

Jean-Pierre Jabouille didn't take long to put himself in front. He was driving a car that was already well set up for the circuit having had many private days there. It only took him ten minutes to set a 1'07"41 which no-one could get near. René Arnoux confirmed that the Renaults were the cars to beat by setting a time half a second slower. The two Renault drivers were the only two to get under 1'08. Gilles Villeneuve, by setting the third fastest time of 1'08"18, manifested himself as the Frenchmen's most dangerous rival. He set his time during the last few laps of the session, demoting Nelson Piquet who stopped practice a good half hour before the end of the session. *"I've got stomach ache. And I've used my only set of qualifying tyres."* Alan Jones spent a long time setting up his car, but took fifth fastest time at the end of the session, in front of Niki Lauda whose Brabham understeered badly so he said. Behind them were the unhappy drivers: Scheckter and Laffite, seventh and eighth respectively, weren't completely satisfied with their cars' handling. The Arrows drivers were setting up their cars. Mass was provisionally one of the non-qualifiers along with Gaillard and Merzario, and Patrese was only just qualified.

Friday afternoon: Arnoux challenges Jabouille

Little René Arnoux was really flying during the second session, to such an extent that he came within four hundredths of Jabouille's time. Jean-Pierre, on the other hand, even though he got below the 1'08 mark, couldn't get as low down as he had in the morning session. Behind them, the next quickest didn't improve their times, for the temperature was considerably higher. In the Ligier pit, there was despair for Laffite dropped down to eleventh place and had no idea how to improve his car's grip. Jacky Ickx, slowly getting used to his new mount despite neck and leg trouble, could at least be content that he'd got within three tenths of Laffite's best. The Lotuses were lost in the middle of the bunch. Mario Andretti had handling trouble, while Reutemann had a repeat of his morning's electrical problem. At the back, Mass managed to get in among the qualifiers, while Patrese had to accompany Gaillard and Merzario among the non-qualifiers.

Saturday morning: Jones challenges

Saturday morning is a working session for all teams, spending the hour and a half available to set the cars up for the race. Apart from the Renaults, Villeneuve's Ferrari and Lauda's Brabham, no one was really happy with their cars the previous evening, so everyone worked with determination to get things sorted. Alan Jones, however, was very happy with his Williams and set the fastest time of the session in 1'08"25, admittedly with nearly empty tanks. Whatever, he seemed to be Goodyear's best chance. Arnoux (1'08"68) set second fastest time and was quickest of the Michelin men. Lauda had a smile on his face again with third fastest time, 1'09"22. The same can't be said of Scheckter: *"it's worse than it was yesterday, the car's no better. But the track's very slippery, it's like it was wet. Jeez..."*

First race for the Arrows A2, but essentially a shakedown session.

Saturday afternoon: Renaults confirm

The final session was stopped half way through when Didier Pironi went off the track, due, it seems, to a faulty upright. The session was stopped to replace the catch fencing and recover the brand new Tyrrell, which was in a bad state. Shortly before, Alan Jones set the fastest time up to that moment in 1'07"99. But the time was disallowed as it had been set when the yellow flags were being shown. *"I was still trying hard"*, said Alan,

Nelson Piquet was once again higher up the grid than Niki Lauda.

not surprisingly disappointed to be relegated from the second to the fourth row. *"It was my only good lap on qualifying tyres and I didn't want to waste them."*

Jabouille improved his time to 1'07"19 which put him well in front of his competitors, and René Arnoux was stationary in the pits with a broken valve spring. In spite of his bold and spectacular efforts, Villeneuve couldn't get onto the front row. He improved by four tenths but remained third fastest. Piquet improved by four hundredths and stayed an excellent fourth fastest, while Scheckter succeeded in overtaking Lauda and then Jones for the reasons given. Laffite, despite gaining a second, was slower than he had hoped and he was only eighth behind Jones.

The two Arrows both managed to qualify after much sorting, that at the expense of De Angelis who accompanied the unfortunate Gaillard and Merzario as non-qualifiers... until Stuck pulled out □

Keke Rosberg, back in Formula One again, showed that he was still as spectacular as ever.

THE FILM OF THE RACE

When Jean-Pierre Jabouille took the lead on the 47th of the 80 laps, it was obvious that unless he had some kind of problem, he had won the race. In fact Jean-Pierre drew away immediately from Villeneuve whose tyres were going off. Even so, there was still a race left: René Arnoux was clearly catching Villeneuve's Ferrari. The Canadian finally took second place, but not without a tremendous fight.

by Mario Luini

1. Villeneuve has shot through from the second row, Scheckter tries to overtake Jabouille while Arnoux is already well back.

2. The bunch seen from behind. Jarier leads the hunt.

3. The order at the end of the first laps is as follows: Villeneuve, Jabouille, Scheckter, Piquet in front of Lauda who is trying to get by Jarier.

4. It's the second time round. Villeneuve is already pulling away from Jabouille and Scheckter. Further back, Arnoux tries to pass Jones.

5. Seventh lap: Arnoux has just past Jarier, taking fifth place.

6. Lauda has been overtaken by Arnoux and Jones. Now he has to stop Laffite getting by who is about to profit from the Austrian's spin anyway.

7. Pironi leads Regazzoni, but the Swiss driver will take tenth place from the Frenchman on the eleventh lap.

For the two Renault turbos, the start of the race was worth watching. For one reason because with a double turbo engine it's a delicate operation, and for another, it would be important for Renault's (few) competitors to grab the lead at the start. And Villeneuve succeeded in doing so. Jabouille, on the other hand, spun his rear wheels and remained stationary for a fraction of a second too long. Arnoux was a lot worse off, for while Jabouille finished the first lap in second place, René was only ninth, led by Villeneuve and Jabouille, but also—in order—Scheckter, Piquet, Jarier, Lauda, Laffite and Jones.

In the wake of the second Renault was Pironi, then Andretti and Regazzoni, another to have a bad start as he was only lowering his visor when the green light went on. Next came Reutemann, Rosberg, Ickx, using the spare Ligier after going off lightly on the warming up lap, Watson, Tambay, Fittipaldi, Lammers, Giacomelli, Mass, Rebaque, Patrese, and bringing up the rear, De Angelis.

It was Arnoux who provided the action at the start of the race. First of all he took Jones and Laffite on the second lap, then Lauda on the third. Obvious the yellow car had certain resources about which its rivals, whoever they were, could do nothing.

By comparison, it's worth considering that Jabouille didn't seem to be able to follow the leader's Ferrari. But on reflection, Jabouille knew what he was doing. The Ferraries advantage, which rose to five seconds on the eleventh lap and then held there, didn't last long, and then began to decrease. On the 26th lap, the Renault was tucked in behind the Ferrari's rear wheels. Gilles was having handling problems with his car, and Jabouille began to reap the rewards of prudence. Behind them, in the meantime, there was still a lot going on. Arnoux had caught and passed Piquet, and then he made his attack on Scheckter. And Jody couldn't do anything about the onslaught and on the 14th lap, little René was up to third place. Jones had also gained some places, passing Piquet, while the second Williams was making similar progress, if not more spectacular. Andretti, Pironi, Laffite and Lauda had to give best to Regazzoni who was handicapped by a recalcitrant gearbox however. And already there were a few retirements and pit stops: Lammers changed the spark box on the fifth lap. Andretti had a puncture on the twelfth, Ickx had his engine break on the 18th, Lauda couldn't restart on the 23rd lap after—a rare event this—a spin, and Mass had damaged a skirt on the new Arrows.

But it was obvious that the lead battle was holding everyone's attention, particularly the patriotic public's interest in Jabouille. The struggle between the two men took a while to be resolved, even though the Renault seemed the better car. Jabouille had caught Villeneuve easily, but the latter's Ferrari had just as good a top speed as the Renault's, and Villeneuve could resist the challenge.

Furthermore, every time Jabouille got his Renault's nose cone under the Ferrari's rear wing, the yellow car's normally excellent handling was upset by the turbulence from the car in front. And suddenly the gap widened again to four seconds. On the exit to a long curve, one of the Renault's front wheels went over the kerb and Jabouille couldn't correct a quick 180 degree spin.

"When I saw that in my mirrors", said Villeneuve later, *"I said to myself, hmm, maybe he won't be able to restart, but on the straight I noticed him again and I knew then that he was*

8

8. René Arnoux is still slicing through the field. He has followed Scheckter for four laps, and overtakes him on the 15th lap.

9

9. Scheckter, Piquet and Jones, fourth, fifth and sixth respectively on the 34th lap, a lap ahead of Patrese (16th) and Giacomelli (20th).

10

10. Jody Scheckter has eased up. Piquet and then Jones pass him and then have their own battle which finishes on the 52cnd lap when the Brazilian goes off the track.

11

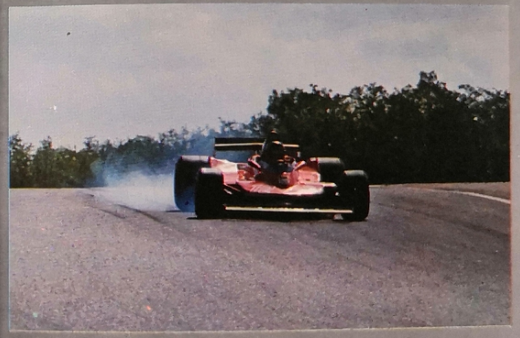
11. After allowing himself to slip back a little, Jabouille catches up Villeneuve again whom he will pass on the 47th lap.

12

12. 39th lap: Reutemann takes eleventh place as he passes Pironi. The Argentine attacks Keke Rosberg.

13

13. Whom he catches immediately. Momentarily seperated by Pironi, they had battled virtually since the start of the race.



14

14. Gilles Villeneuve has let Jabouille pull away, but he continues to force the pace and drive at the limit, knowing that Arnoux isn't far behind.

15

15. That's it, it's all over for the Renaults which have taken first and third places. Jabouille is exhausted, but the emotion is felt throughout the team.

going to take me.''

Curiously enough, the Renault driver wasn't so sure. *''Gilles was very quick and I couldn't corner as quick as I would have liked to in order to catch him again. It wasn't going to be easy.''*

Jabouille's spin took place on the 34th lap. Within another four laps, the Renault was right behind the Ferrari again and the duel restarted, still undecided. But Gilles wasn't the only one with tyre trouble. Scheckter, despite his rather more modest pace, was obviously having more and more trouble keeping his Ferrari on the track. On the 34th lap Jody had to let Piquet by into fourth place, and a lap later, Jones took fifth place from the Ferrari driver. At half distance the order was as follows: Villeneuve leading with Jabouille right behind him, Arnoux in third place, 14 seconds further back. Piquet and Jones in line were eight seconds further behind, leading Scheckter by three seconds. Then came Jarier, another eight seconds behind, Regga another two behind him, then Laffite, Rosberg and Reutemann, all of them on the same lap. A lap behing were Pironi, Fittipaldi, Tambay, Patrese, Rebaque, De Angelis, and Watson who had just stopped in the pits. Shortly afterwards, Jabouille made another great effort, but Gilles responded magnificently.

Fortunately for Jabouille, and unfortunately for Villeneuve, the matter was about to be settled for them. And it was De Angelis, surprised to be caught by the two leaders in the fast corner before the straight, who was the decisive factor.

''When I saw him'', said Gilles. *''I immediately felt that he didn't know which way to go, but it was too late, his hesitation meant that I had to lift off.''*

''A stroke of luck'', admited Jabouille afterwards. *''Gilles was held up, I came out of the corner better onto the straight and I was through.''* You can imagine that the crowd went wild and the hills of Prenois echoed with their cheers. So that was that. Jabouille, finally in the lead, pulled away as though he had something to prove, if he needed to, for one could see that both man and machine were the best on the day. Further ack, the battle between Piquet, who was driving well, and Jones ended abruptly, thanks to a driver error.

The young Brazilian went off the track at high speed, virtually at the same place that Pironi went off during practice, and equally unhurt. Scheckter picked up an unexpected place, and might have got two points for fifth place which would have helped his championship score. But he only held the position for two laps before pitting to replace his worn-out tyres. He rejoined in eighth place, behind Laffite. The two championship leaders were out of the points and it was nearly over.

A little before, De Angelis and Pironi had also had to stop in the pits to change tyres, Didier pitting again a little later with a chassis problem.

The end of the race was near, but now it was the second Renault's turn to be the focus of attention. Arnoux, 14 seconds behind Villeneuve within 20 laps of the finish, was intent on completing his magnificent climb through the field, a climb that he'd started immediately after his tardy start. Six laps from the end, he was right behind the Ferrari, willed on by the crowd. With three laps to go, he was in second place, the crowd went mad. In the end, Arnoux finished up third, after a battle that was unique in Formula One. But that, well, that's another story which is told elsewhere in detail. □

«from race to race»

PATRICK DEPAILLER'S FIGHT

As seven 'o' clock approached on Sunday the third of June, the sun was going down behind the Auvergne mountains. It was a Sunday like any other, when there's no Grand Prix, For a driver fond of freedom and space, it was a day of relaxation. Suddenly a gust of wind caught his hang-glider, the two of them fell to ground, into the mountain at 45 mph.

Patrick, ever since he was first in hospital, has been determined and optimistic. Many friends have called him by phone (left) to encourage him.

The hang-glider: another sport, a different kind of enjoyment, but so easily and quickly, disaster.

Below left: at Jarama Patrick had just gone ahead for the first time in the season. The championship battle was now a reality for him.

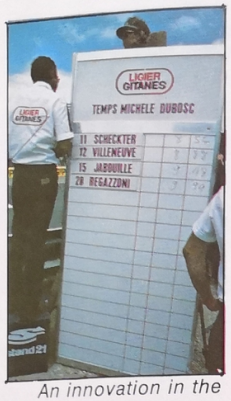
Patrick Depailler had leg injuries. A helicopter quickly flew him to the Clinique de la Chataigneraie in Clermont Ferrand. Professor Raux was waiting for him there. The French driver was operated on for four hours. They feared the worst, but fortunately he had no internal injuries. Fate, an accident, coincidence, chance ? But wasn't it also unintentional, careless, irresponsible ? Opinion was divided. The world of motor racing had their own ideas. « *Patrick could have had similar injuries getting out of his bath. Why should one be allowed to kill oneself one weekend and not the next ?* » asked Jacques Laffite.

A driver is an exceptional individual. His life isn't like other people's. Risk, adventure, the unexpected and the unforseeable are part of his life.
Hang-gliding expresses a competitive character. Being suspended somewhere between sky and ground is fairly similar to driving at the limit around a narrow tarmac track.

But it's easy to see that Patrick Depailler is to be pitied and has been punished. He now has another battle on his hands, one that he alone can fight, with its disappointments, its bitterness, no longer with the possibility of victory against another driver.

But this accident came at a bad time. Patrick still had the chance of becoming World Champion, despite Ferrari's recent success. Furthermore, he and Jacques Laffite could keep other drivers out of the points, work as a team. But now Ligiers's chances in the World Championship must rest with Laffite alone.
After two weeks in the Clermont-Ferrand hospital, Patrick Depailler was taken to a Paris hospital. On Friday June 22, he had another operation. But now he is rapidly improving, and he should only be in hospital another month. « *If everything goes well, and I don't have any complications, I hope to be driving again at the Dutch Grand Prix at the end of August. I feel good and now everything is going well. I'm eating well and sleeping well. To begin with, I was losing sleep because of my elongated position* (to cure his broken legs). *I scarcely slept for the first ten days. Now it's a race against the clock for both myself and the surgeons. I want to start the maximum number of Grands Prix. OK, there's always a difference between one's hopes and reality, but let's just say I want to be fit again as soon as possible and as fit as possible* ».
Patrick is still in good spirits. He hasn't lost sense of humour at all. His forearm is also in plaster, but he says that that doesn't hurt him.
His worst pain was from his little finger which he hurt the previous night when he fell when having a nightmare.
Was he dreaming about his accident or pole position ? He didn't remember, the brutal waking had made him forget.
As for his future career, he considers that nothing has changed, even though he's out of action when he had a good chance of becoming World Champion. The question is whether he will ever be in such a good position again. « *Seven years ago, I had a similar sort of accident on a motorcycle, possibly worse, and I completely recovered. I hope I'll recover this time in the same way. Within motor racing, the situation is slightly different to that instance, thanks to Ligier's success, but on the medical an humanitarian front, it's basically similar* ».
Whatever his circumstances, Patrick Depailler is optimistic as ever. In fact he's in better spirits than at other times when it's been more important.
« Grand Prix » sends the French driver its best wishes for a speedy recovery and hopes that he'll soon be back on top of his sport in his rightful position, not in a hospital bed but driving his racing car, the Ligier-Gitanes JS11 □

Of course she's bought her pass there were some for sale but who would dream of asking her to leave.



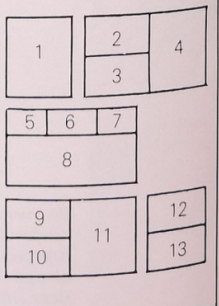
An innovation in the pits : this enormous board showed the times taken by Michele Dubosc and allowed journalists to follow what was going on in practice. The writing may have been by hand, but there was nothing amateur about the system.

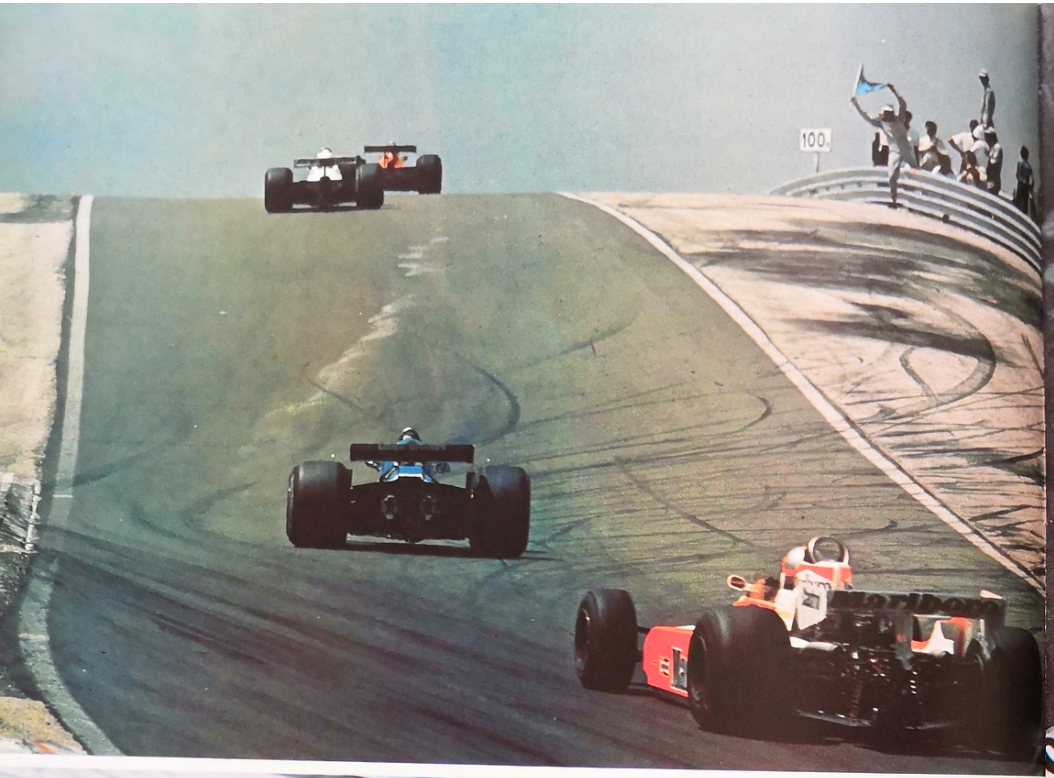
Jacky Ickx gets a lift from Jochen Mass back to the pits after the race. Note the damage to the side of the Arrows... and Ickx's unhappy expression after being let down by his engine.

Colin Chapman loathes traffic jams. His personal transport throughout his stay in France was this helicopter.

There wasn't really a motor cycle race at Dijon. The motor cycles were there as a flying squad ready for any incident that required them.

1. Reutemann, still a slim chance of taking the championship.
2. An undulating circuit. Here Watson follows Ickx closely.
3. Rosberg slides, Reutemann's right behind: it was one of the longest battles of the race.
4. McLaren: waiting for the M29.
5. Fast start for Piquet's Brabham, but unfortunately his BT 48 didn't finish.
6. Tyre fitter: a tiring job.
7. The heart of Ferrari, before it all starts: the T4 is still in the transporter.
8. The pack.
9. Lauda: only one point so far. When will he get more ?
10. The Alfa Romeo A1 reappeared after making its debut at the Belgian Grand Prix.
11. Nelson Piquet: he made the same mistake during the race as his well-known teammate.
12. The front of the new Arrows A2: there's something warlike about it.
13. A fan of Jarier, Pironi or even Ken Tyrrell himself ?

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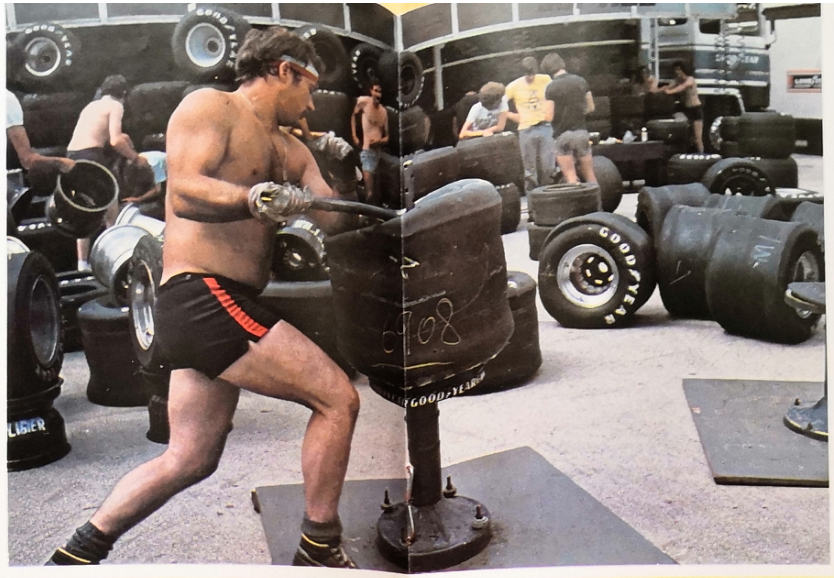
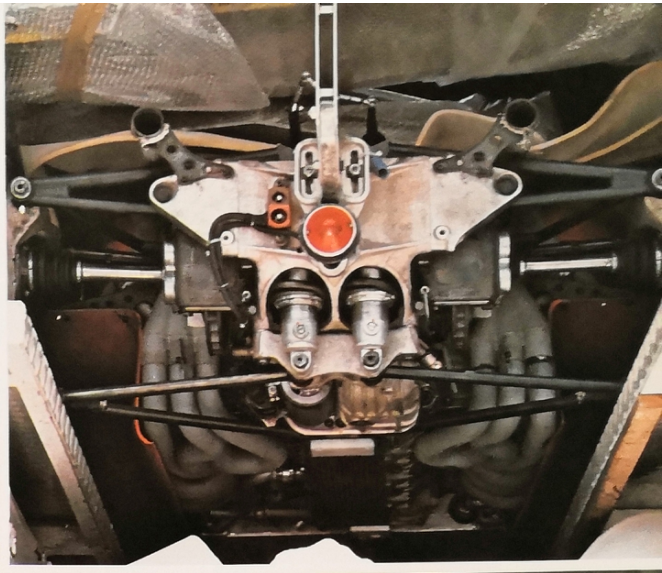
TISSOT
MARTINI RACING

Marlboro
GOODYEAR
7





Marlboro
COPERSUCAR
Marlboro

parmalat
DIETRO

35
SCANI

ALFA
ROMEO
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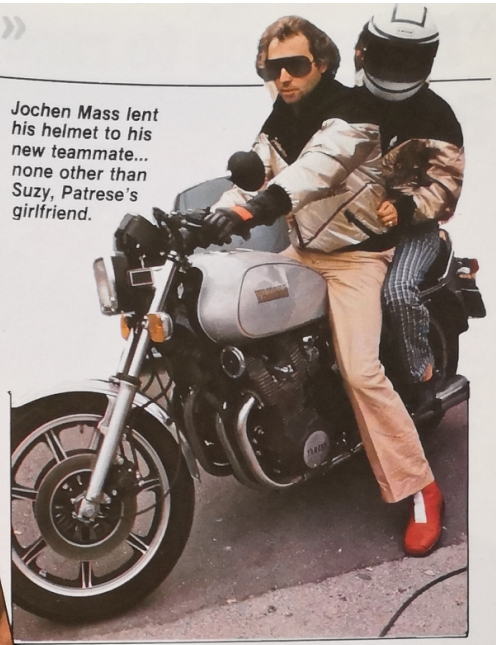
«from race to race»

David Thieme, following Colin Chapman's example, moved around by air. History doesn't relate whether they raced to their hotels.



Jochen Mass lent his helmet to his new teammate... none other than Suzy, Patrese's girlfriend.

A victory dinner for Jabouille and Arnoux. A winning atmosphere, but also an air of fatigue, with glasses of champagne, longed for these last two years.

Alfa Romeo were back again. It'll be good to see Giacomelli doing a full season.

Gerard Larrousse, Francois Castaing and Michel Tetu : the brains of the Renault team on Sunday morning at seven'o' clock. Arriving early was the only way of avoiding the jams.

Dressed in white, don't get the wrong ideas.

THE INTRICACIES OF FORMULA ONE ACCOUNTS

Nearly two millions spectators in a season; 700 million TV audience; price of seats between £5.50 and £34, depending on the country. A good Formula One car costs about £400,000, a whole grid of them is worth £10,000,000. The price of putting on a Grand Prix is about £400,000. More than 2,000 people (mechanics, designers, public relations men, advertising men) live on Formula One alone.

And within theses figures and the races, who pays? According to F.O.C.A.'s regulations (Formula One Constructors Association), there are two different paying structures. The first is based on the finishing positions during the previous year's World Championship and the attraction of the car and driver. The second is based on practice and the times et, and finally, on the results obtained during the race.

But even this structure scarcely balances the books of a team. Formula One is still very much developing, and there are two types of team: those who are specialist Formula One teams like Tyrrell, Ligier and Williams, and the big car firms who now find that Formula One is the best way of promoting their name in motor racing. The cost of building sports cars for the World Championship of Makes and Le Mans has favoured the building of Formula One cars for maximum publicity, if less identification with their road cars. Consequently, Formula One is now constructors battle as well as a drivers series. Renault, Fiat (with Ferrari), and Alfa Romeo have considerably larger resources than Tyrrell, Ligier, Williams, McLaren, but they take part in the same races with the same final objective. In order to balance this seemingly unequal struggle, the specialist Formula One teams have to call on backers, universally known as sponsors who bring the necessary dollars, Deutschmarks, pounds, lira and francs in exchange for advertising space on the cars.

Advertising, always advertising you may say. It's a part of the consumer society without which the world of motor racing could scarcely exist, or certainly not in its present form.

One year's results on the track will make a lot of difference to the appearance of a racing car the next season. After being World Champions in 1978, Colin Chapman's Lotuses almost look like Christmas trees this year. Stickers, logos, names, artwork of every king decorate each car depending on success. The final effect is generally considered to be in harmony and good taste, but that isn't the ultimate aim of course.

There again, there are two different types of sponsor. The first has noting to do with cars, their names decorating cars in order to advertise. The second is involved in motoring, closely allied to motor sport, accessory manufacturers for example.

THE POPULAR LOTUS

It's difficult to discerne the British Racing Green on the Lotus cars; there are six different sponsors whose multicoloured stickers attract attention.

Up to the end of last year, Colin Chapman had the financial support of the English tobacco firm John Player Special. This year, sponsors fought for space on the Lotus cars, which has resulted in quite a few contracts.

After a year's absence, Martini have come back into Formula One. In choosing Lotus, the World Champions, Martini International have had to invest many hundreds of thousands of pounds (at least £600,000).

Martini, like other firms in Formula One, are looking for a certain kind of image. The glamour, speed, and competition of motor racing creates that image associating the team, the car, the sponsor and the product. Martini haven't been on a winning car since August 1975 when Reutermann's Brabham won the German Grand Prix. Prestige doesn't necessarily mean success on the track. Formula One is prone to fluctuations as in any sport, and it's important to make the right choice. "Returns are made when one is with a top team" (one at the head of the field) say the men at Martini International. Obviously, it's better and more rewarding to be associated with a team that's winning.

Advertising alcoholic drinks and cigarettes allied to sporting events is forbidden in many Europeans countries. Advertising is limited in the press, on the radio and on television. Formula One has become a mass-medium whereby it can

→

make a direct impact on the public. Such advertising is worth many good individual advertising spots.

THE IMPORTANCE OF RESULTS: THE RIGHT CHOICE

Marlboro see their sponsorship programme as a way of getting round anti-cigarette advertising laws. Their efforts in Formula One get round the law. The ex-President and former rugby international Ronnie Thompson started the programme in 1971 with BRM. Since then vice-president Aleardo Buzzi, a local supporter of Regazzoni, has intensified the Philip Morris support. Thanks to the girls, the hats, the sticker and cigarette hand-outs, the tee-shirts and the enormous banners, the red and white of Marlboro is part of the Formula One world. The actual budget is secret of course, but the figures must run into millions. Furthermore, there is the involvement with the McLaren team and also with various drivers who have personal contracts, which virtually covers the field. Even though some of the company's members are disappointed with Teddy Mayer's team's lack of results, there are good reasons to stay in Formula One. *"We have a long term programme,"* says Aleardo Buzzi. *"In five years we've won the World Championship title twice with Emerson Fittipaldi and James Hunt. We've never had such a long period in the doldrums. It's had its problems, in particular in Patrick Tambay's case, but we haven't lost confidence because in terms of the whole operation, the team itself is beneficial. A racing driver's image is of freedom, a taste for adventure and risk, virility; in some ways they're twentieth century cowboys. It's extremely difficult to measure the extent of the return, but the choice of our colours and the extent of our operation casts no doubt on the political side of the promotion. Our sales have increased by 45 per cent in countries where a Grand Prix is held. Certainly there's still a problem with television who show a certain unwillingness when it comes to cigarette manufacturers, but to tell you the truth, that's not our problem, it's television's problem."* *"Beside,"* continues Mike Horst, Marlboro's competition man in France, *"the Ligier team's success and wins have helped us. The French government and television have shown a certain amount of tolerance. It's obvious that we're in competition with Gitanes, both on and off the track, but this year our team (McLaren) aren't that competitive, so what interests us is the number of TV playbacks that we get. We hope that the M29 will be successful. Formula One has developed a lot and costs build up thanks to long periods of research and the sophistication of the materials used, and that's why we've had to strech the budget in order to give our team the best possible chance."*

CIGARETTES AND ALCOHOL, LIMITED OR PROHIBITED ADVERTISING

In terms of competition, SEITA (Société d'Exploitation Industrielle des Tabacs et Allumettes), or Gitanes as we know it, have a hard time in the same field of operation. Their agreement with Ligier was hard to draw up, thanks to French anti-tobacco laws. Ligier's success this season have changed things quite a lot. The French government, through the Minister of Youth and Sport, have promised a grant to Ligier. Ligier's contract is worth £1,000,000, but one must take into account how this can be exploited. *"In Spetember 1978,"* explains Jean Carriere, the bronzed and frank speaking President of SEITA, *"Guy Ligier came to see me in order to explain how and why he wanted to win the World Championship. He also expressed his wish and the need to have two cars. We replied by considerably increasing our support with a sole condition: that the second driver to line up beside Jacques Laffite would be French. They signed Patrick Depailler. The start of the season went very well. But it must be said that the unfortunate accident to Depailler has been a bad blow which has cut our chances of winning the title by fifty per cent. We have a contract for two years with Ligier, renewable each season, but I must admit that it's going to be difficult to extend it beyond that period. We've virtually reached the limit of our financial resources. Personnally I think this form of promotion is very important for the Societe."*

CANDY: FROM RED TO BLUE

Is it possible to exist without a sponsor if one is not one of the big car companies? Ken Tyrrell tried to answer this question. During the first part of the year, having lost both Elf and First National City Bank as sponsors, Tyrrell's cars were bare of advertising. All the same, Tyrrell still ran two cars for Jean-Pierre Jarier and Didier Pironi who backed him well and got results. But since the Belgian Grand Prix, he's had sponsorship from the Italian washing machine firm Candy. The firm had previously sponsored a basket-ball team, and were now moving into motor sport. *"We needed to revive our image,"* says the president of the company, Peppino Fumagelli, *"and the technical world of Formula One corresponds well with our industry. It's a family firm, and my late brother was always in favour of helping sport. I didn't really know Ken Tyrrell well, but I've already learnt how to get on with him and have come to respect him. We've come to a good agreement, we don't get involved in his decisions on the racing side, and of course, he is indifferent to our problems concerning our products and washing machines. We were criticised by the Italian press for giving our support to two French*

Aleardo Buzzi (Marlboro).

Jean Carrière (Gitanes) Guy Ligier.

David Thieme (Essex). Colin Chapman.

Peppino Fumagelli (Candy).

Renault.

Graf Rossi.

drivers and not to an Italian driver. Tyrrell had already chosen his drivers and we think he has made a good choice. Furthermore, he's more qualified to make that choice than us. Our company has branches in various countries and Formula One's advantage is that it takes in those various countries." "I've been involved with the Tyrrell team at two Grand Prix, Zolder and Monaco. I've always been interested in motor sport—I live in Monza—but my sponsoring a team, one quickly becomes very involved. You live it, tremble with it, suffer it and rejoice in it with the others involved. I've always been a Ferrari fan but now I've changed from red to blue. After all, Pironi has Italian ancestry. At the moment, we're the sole sponsors of the team, but if another sponsor came along and could help with technical development, we wouldn't object because the Tyrrells would be more competitive."

ESSEX: A BENEFACTOR

David Thieme's Essex company is in rather a different position. David Thieme, a young American millionaire who is keen on motor sport, is more a benefactor than a sponsor. He has nothing to sell, but more makes the name of Essex well-known. Since he started, he's more or less happy. Anyway, one doesn't trifle with the resources that he has available, prestige and the best in life are just as important as the race itself. Thieme is what is known in the world of petrol as a trader. He arranges the transport, refining, the buying and selling of oil. In short, he's an middle-man.

Essex's investment in Formula One runs into millions of pounds. "Our involvement with Porsche in the Le Mans 24 Hours was a disapointment," says Thieme. "But we was have confidence in the Lotus team. Theoretically we should be with them for three seasons, with the contracts being renewable each years."

Ken Tyrell
François Guiter.

Carlos Reutmann

ELF: A LONG TERM PROGRAMME, BUT ONE THAT'S UNDER THREAT

Petrol company involvement is more and more limited when it comes to motor sport. Nowadays it is restricted to the simple supply of petrol. Elf have supported the sport for thirteen years, but in the last two years, the budget has been halved. Recent measures and economic restrictions lead one to believe that the budget could be further affected in the future. It's not easy for a petrol company to intensify their efforts these days. In the past Elf have done much to develop young drivers in the lesser Formula. Thanks to this well thought-out programme, seven French drivers are now in Formula One.

"Our aim is different," explains François Guiter. "We don't want to sell our product, but we want to be associated with competition, so that there is identification between Elf and racing. The last six year's results in motor racing are as important for us as our economic returns. We've made winners, we've helped both drivers and manufacturers to the top. Elf are associated with this success, and the consumer knows it, I'm certain of that."

RENAULT, FIAT, ALFA... A DIFFERENT AIM

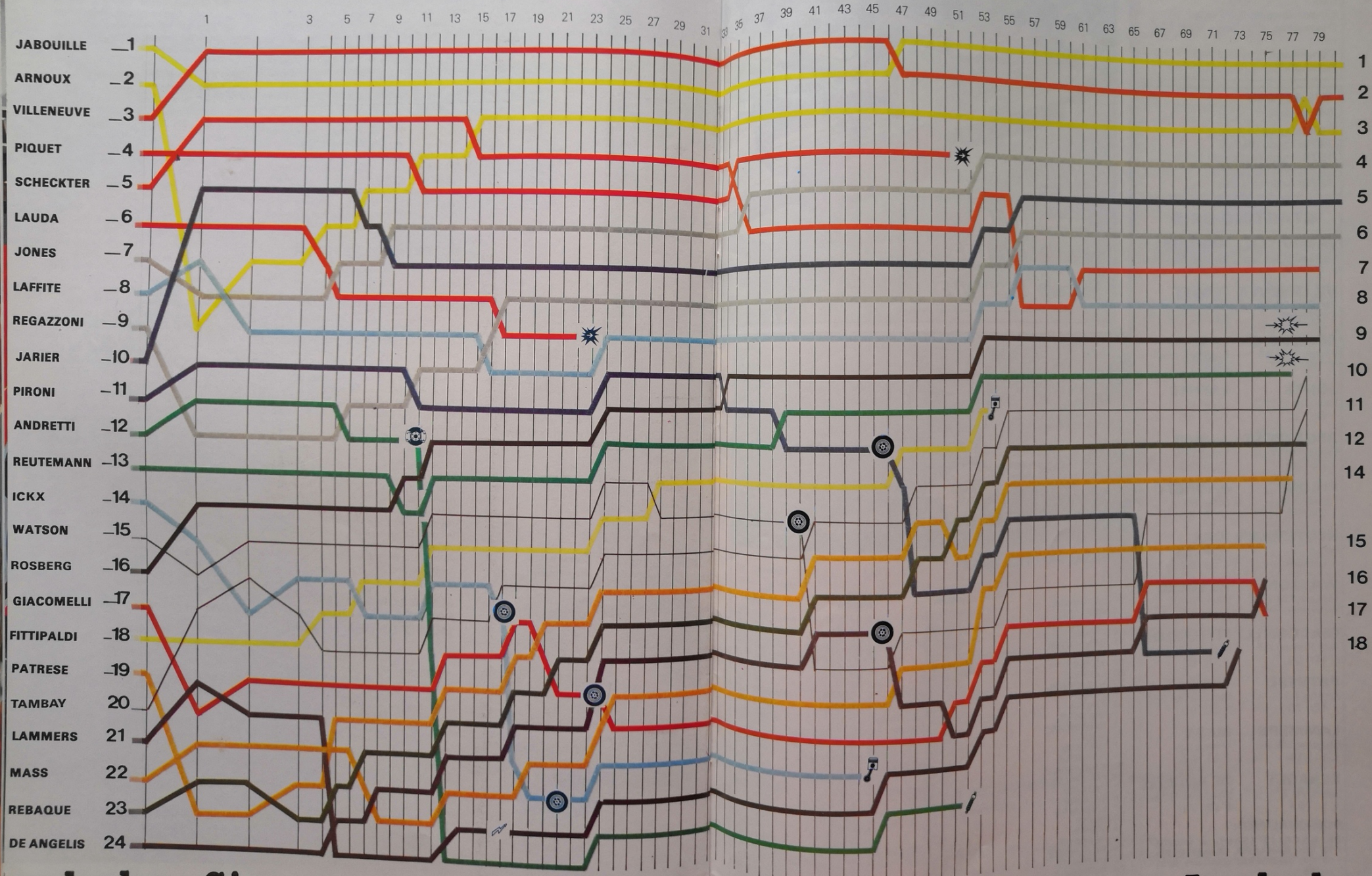
For some major motor manufacturers in the world, Formula One has become a means of promoting their road cars, even though the relationship between the two types of a car is almost non-existent apart from the name. Fiat has always been involved in motor sport, with Lancia in rallying and with Ferrari on the tracks. They say that officially Fiat give Ferrari £2,500,000 but on top of that is the research wich is undertaken in all big car firms; Ferrari has the sporting image of winning; Fiat is the power behind them.

Renault has made a gamble by entering a turbocharged car in Formula One. It may be a risk for the French company, but it has also had its publicity benefits. "We've had our ups and downs," says Bernard Hanon, the director of the car side. "But I think the worst is over. It's nothing but a question of waiting, I believe that our technical idea is basically sound. We've always been successful in everything we've done; Formula One is the most prestigious part of motor racing, but interesting. Within the company, everyone knows that it's difficult, even though there may be one or two impatent voices."

Nearly fifty countries televised Grands Prix last year. Even China hired Visnews in order to televise extracts of the race on the national network. That demonstrates the impact of Formula One, and why there are sponsors for it.

Money is what makes it tick. As far as everyone is concerned, it's a form of expressing competition and power. Sponsorship, in whatever form or for whatever aim, is indispensible in motor sport in general, and Formula One in particular. □

Lap by lap - Giro per giro - Runde um Runde - Tour par tour - Lap by lap -



Lap by lap - Giro per giro - Runde um Runde - Tour par tour - Lap by lap -

Dijon statistics

FRENCH GRAND PRIX

Date: July 1, 1979
Circuit length: 2.36 miles
Distance: 80 laps, 188.896 miles
Conditions: grey and fresh
Attendance: 120,000 spectators

THE RECORD

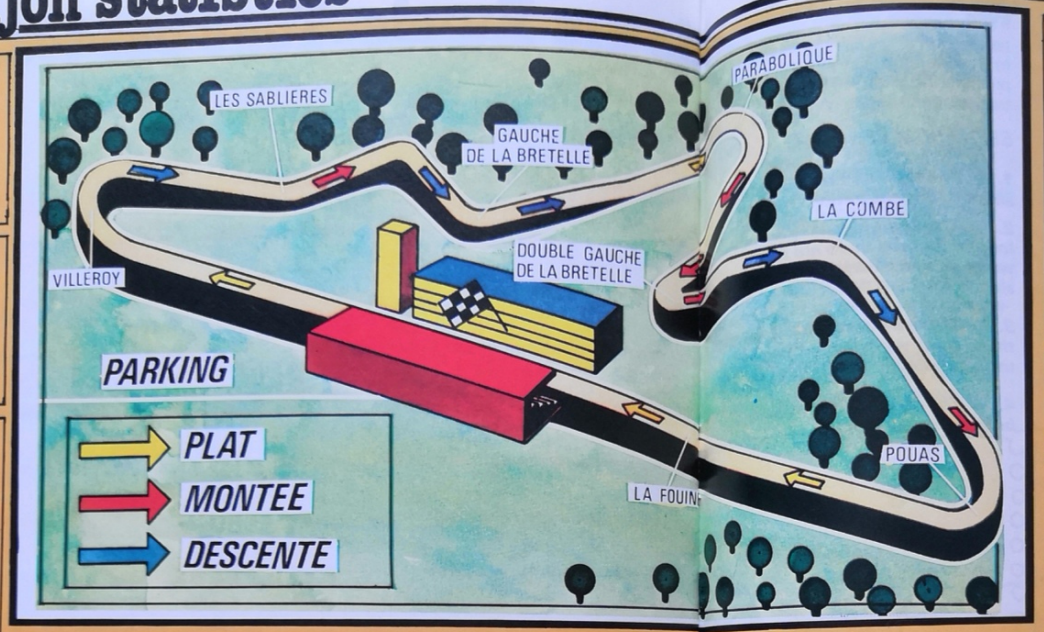
(last five races)

1974: Peterson (Lotus)
1975: Lauda (Ferrari)
1976: Hunt (McLaren)
1977: Andretti (Lotus)
1978: Andretti (Lotus)

STARTING GRID

JABOUILLE Renault RS 11 1'07"19
ARNOUX Renault RS 12 1'07"45
VILLENEUVE Ferrari 312 T4 1'07"65
PIQUET Brabham Alfa BT48 1'08"13
SCHECKTER Ferrari 312 T4 1'08"15
LAUDA Brabham Alfa BT48 1'08"15
JONES Williams FW07 1'08"23
LAFFITE Ligier JS 11 1'08"55
REGAZZONI Williams FW 07 1'08"65
JARIER Tyrrell 009 1'08"80
PIRONI Tyrrell 009 1'08"95
ANDRETTI Lotus 80 1'09"35
REUTEMANN Lotus 79 1'09"36
ICKX Ligier JS 11 1'09"68
WATSON McLaren M 28C 1'09"97
ROSBERG Wolf WR 8 1'10"15
GIACOMELLI Alfa Romeo A1 1'10"59
FITTIPALDI Copersucar F5A 1'10"61
PATRESE Arrows A2 1'10"70
TAMBAY McLaren M 28C 1'10"92
LAMMERS Shadow DN 9B 1'11"14
MASS Arrows A2 1'11"14
REBAQUE Lotus 79 1'11"97
DE ANGELIS Shadow DN 9B 1'12"23

NON-QUALIFIED:
DE ANGELIS (Shadow DN9B) 1'12"23; GAILLARD (Ensign N179) 1'13"00; MERZARIO (Merzario A/2) 1'14"95



OFFICIAL PRACTICE TIMES

		1st session	2cnd session	3rd session
15	JABOUILLE	1'07"41	1'07"88	1'07"19
16	ARNOUX	1'07"96	1'07"45	1'10"55
12	VILLENEUVE	1'08"18	1'08"55	1'07"65
6	PIQUET	1'08"19	1'08"73	1'08"13
11	SCHECKTER	1'08"58	1'09"25	1'08"15
5	LAUDA	1'08"45	1'09"40	1'08"20
27	JONES	1'08"23	1'08"27	1'08"73
26	LAFFITE	1'09"39	1'10"45	1'08"55
28	REGAZZONI	1'09"97	1'09"01	1'08"65
4	JARIER	1'09"85	1'09"38	1'08"80
3	PIRONI	1'09"70	1'08"95	1'10"78
1	ANDRETTI	1'11"08	1'10"67	1'09"35
2	REUTEMANN	1'09"96	1'13"43	1'09"36
25	ICKX	1'10"82	1'09"68	1'10"00
7	WATSON	1'09"97	1'11"56	1'11"04
20	ROSBERG	1'10"66	1'10"15	1'10"45
35	GIACOMELLI	1'11"79	1'11"02	1'10"59
14	FITTIPALDI	1'12"90	1'11"12	1'10"61
29	PATRESE	1'13"89	1'12"88	1'10"70
8	TAMBAY	1'11"10	1'10"92	1'11"40
17	LAMMERS	1'12"10	1'12"11	1'11"14
30	MASS	1'14"08	1'11"89	1'11"14
9	STUCK	1'12"10	1'12"54	1'11"75
31	REBAQUE	1'12"25	1'12"40	1'11"97
18	DE ANGELIS	1'12"34	1'12"30	1'12"23
22	GAILLARD	1'14"29	1'14"03	1'13"00
24	MERZARIO	1'14"95	1'17"23	1'17"05

UNOFFICIAL PRACTICE

INDICATIVE TIMES COURTESY OF THE RENAULT AND FERRARI TEAMS

Jabouille: 1'09"85 - **Jones:** 1'10"16 - **Villeneuve:** 1'10"28 - **Arnoux:** 1'10"29 - **Scheckter:** 1'10"53 - **Piquet:** 1'10"54 - **Laffite:** 1'10"90 - **Lauda:** 1'11"50 - **Regazzoni:** 1'11"84 - **Ickx:** 1'11"96 - **Pironi:** 1'12"09 - **Watson:** 1'12"11 - **Rosberg:** 1'12"13 - **Andretti:** 1'12"34 - **Jarier:** 1'12"41 - **Reutemann:** 1'12"72

No timed: Patrese - Tambay - Giacomelli - Rebaque - Lammers - De Angelis

INDICATIVE TIMES COURTESY OF THE LIGIER GITANES TEAM

A. Jones: 1'08"25 - **Arnoux:** 1'08"68 - **Lauda:** 1'09"22 - **Jabouille:** 1'09"73 - **Villeneuve:** 1'09"83 - **Laffite:** 1'09"95 - **Regazzoni:** 1'10"10 - **Reutemann:** 1'10"44 - **Giacomelli:** 1'10"67 - **Piquet:** 1'10"69 - **Andretti:** 1'10"76 - **Watson:** 1'10"81 - **Scheckter:** 1'10"97 - **Lammers:** 1'10"97 - **Jarier:** 1'11"05 - **Ickx:** 1'11"29 - **Rosberg:** 1'11"45 - **Pironi:** 1'11"57 - **Patrese:** 1'11"60 - **Tambay:** 1'11"76 - **Massz** 1'12"42 - **Fittipaldi:** 1'12"49 - **De Angelis:** 1'12"53 - **Rebaque:** 1'12"64 - **Gaillard:** 1'13"01

No timed: Stuck - Merzario

PIT STOPS AND RETIREMENTS

Lammers: stopped 17th lap, spark box
Andretti: stopped 12th lap, brakes, retired 52cnd lap, suspension damaged following puncture
Ickx: stopped 18th lap, changed tyres, stopped 21st lap, changed rear tyres, retired 45th lap, engine
Lauda: retired 23rd lap, spun, engine stalled
Giacomelli: stopped 24th lap, changed tyre, then gearbox trouble
Watson: stopped 40th lap, changed tyres
De Angelis: stopped 47th lap, changed tyres
Pironi: stopped 47th lap, changed tyres, then 65th lap and retired 72cnd lap, rear suspension
Piquet: left track, 52cnd lap
Fittipaldi: retired 54th lap, engine
Reutemann: retired 77th lap, collision with Rosberg

CONSTRUCTORS CUP

1. Ferrari 42 pts. **2.** Ligier 33 pts. **3.** Lotus 20 pts. **4.** Tyrrell 15 pts. **5.** Williams 13 pts. **6.** McLaren 8 pts. **7.** Arrows 3 pts. **8.** Copersucar and Brabham 1 pt.

PROVISIONAL CHAMPIONSHIP CLASSIFICATION

(after the Argentine, Brazilian, South African, USA West, Spanish, Belgian, Monaco and French GPs)

1. Scheckter 30 pts. **2.** Villeneuve 26 pts. **3.** Laffite 24 pts. **4.** Depailler 20 pts. **4.** Reutemann 20 pts. **6.** Andretti 12 pts. **7.** Jarier 9 pts. **7.** Jabouille 9 pts. **9.** Pironi 8 pts. **9.** Watson 8 pts. **11.** Regazzoni 7 pts. **11.** Jones 7 pts. **13.** Arnoux 4 pts. **14.** Patrese 2 pts. **15.** Fittipaldi, Lauda, Mass 1 pt.

RESULTS

Old record: Andretti 1977 (Lotus) 1'13"75

1.	Jabouille	Renault RS 11	1 h 35'20"42
2.	Villeneuve	Ferrari 312 T4	14"6 behind
3.	Arnoux	Renault RS 12	14"8 behind
4.	Jones	Williams FW 07	37" behind
5.	Jarier	Tyrrell 009	1'04" behind
6.	Regazzoni	Williams FW 07	1'05" behind
7.	Scheckter	Ferrari 312 T4	1 lap behind
8.	Laffite	Ligier JS 11	1 lap behind
9.	Rosberg	Wolf WR8	1 lap behind
10.	Tambay	McLaren M 28C	2 laps behind
11.	Watson	McLaren M 28C	2 laps behind
12.	Rebaque	Lotus 79	2 laps behind
13.	Reutemann	Lotus 79	3 laps behind
14.	Patrese	Arrows A2	3 laps behind
15.	Mass	Arrows A2	5 laps behind
16.	De Angelis	Shadow DN9B	5 laps behind
17.	Giacomelli	Alfa Romeo A1	5 laps behind
18.	Lammers	Shadow DN9B	7 laps behind

Fastest lap: Arnoux in 1'09"16, 124.108 mph

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ARROWS A2: A THIRD GENERATION

Both drivers and onlookers were eager to see the new Arrows A2 which made its first appearance at Dijon: the least we can say is that it wasn't disappointing. The latest car from Tony Southgate's pen certainly didn't lack originality. The English designer has stepped away from conformity.

by Giorgio PIOLA

The Arrows A2 was designed in the wind tunnel, but once again it was noticeable that there's a lot of difference between a wind tunnel and a track: Things that worked well in the tunnel don't necessarily have the same hoped-for effect.

Tony Southgate really started work on the car in January, and then he spent three months in a special wind-tunnel in Kensington, London where it was possible to simulate ground effect on a type of rolling road. The new Arrows can be considered as the first of a third generation of ground effect car. The thinking behind goes over the first generation (Lotus 79, Ligier JS 11, Tyrrel 009) nor by the second generation (Lotus 80).

The Arrows A2 may feature some of the points of the Lotus 80, and also it may call on some of the more revolutionary ideas behind the Ligier JS 11 and the Ferrari 312 T4. Tony Southgate speaks of the thinking behind his new car: *"there was no point in building a conventional wing car. We had to go further, to produce a new car that set a higher technological standard. Admittedly, we've had to take a risk in so doing. But when you look at the Ligier which is a good car, you realise that you have to go further in terms of aerodynamics to have a chance of beating it."*

On paper, the new Arrows looks good. But while it has some of Chapman's ideas to it, it goes further. The underneath of the A2 is completely enclosed and it also follows Ligier's method of air extraction. Chapman seem to have gone in the opposite direction with the Lotus 80, excluding the use of the rear tyres as a means of extracting air. He seems to be wary of it interfering with the air flow under the car at the rear end. Southgate on the other hand, has come to a compromise. Thanks to two mini-skirts, he has been able to divide the two air flows, the one under the car and the other towards the rear wheels from the side pods.

So it has some Lotus 80 but perhaps more advanced, with some Ligier side pod ideas, but equally, a little of Ferrari when it comes to the nose section. In his quest to be ahead, Southgate has taken into account the importance of good air separation. Mauro Forghieri started it with his Ferrari T4. Southgate has designed along the same lines. His nose cone is simply meant to point through the air, and then there are two small wings beside the front suspension. *"They're not simply balancing wings as one would find mounted on the nose cone of any conventional car. They control the air flow into the side pods and the main wings which are mounted slightly further back,"* explains Southgate.

In order not to disturb either the air flow beneath or above the car, the hot air from the radiators is piped back along the side pods, in the same way as on the Ferrari T4. The exhaust system is also designed with this in mind.

But we haven't yet finished with the new ideas built into the Arrows A2: like the Ferrari T4A, its engine and gearbox are slightly inclined, raised at the back in order to improve air flow under the car.

Dijon was more of a test session for the new car than a race. There were a number of little problems, but the main one was due to the inclination of the engine and gearbox. In fact the centre of gravity of the new car is lower than most, but the rear track has a higher centre of gravity.

But this high centre of gravity meant that the car rolled more than usual, and it wasn't possible to sort that out at Dijon. The problem with this rolling was that it caused the downforce to vary constantly from one side to the other, and meant that the car was unstable.

Incidently, the front track is also wider than on most current Formula One cars. Will the new Arrows go the same way as the Lotus 80? It's too early to say, but this car follows logical development along the lines currently fashionable in Formula One. Having said that, let's say that it's not for the car's potential that we have doubts, but for its complexities. Every two weeks now, there is a Grand Prix with two officially timed practice sessions. With such a complicated car, it's too easy for it to spend too much time in the pits while the mechanics try to resolve and get at the source of problems, while it should be out on the track trying to set a good time. □

SEEN FROM BENEATH

1. – The nose of the Arrows A2 is shaped for penetration.

2. – The front nose fins are no longer. Instead there are small wings mounted on the front suspension.

3. – There's a small flap fitted to those front wings which can be used to balance the front of the car.

4. – The side skirts stop just before the rear wheels.

5. – Following the line of the side plates, inside the rear wheels, there are a couple of small skirts which separate the air flow from the extractors from the interior flow.

6. – Opening for the rear suspension.

7. – In front of the rear wheels there are two extractors as on the Ligier, but following a more developped principle because that flow is separated by the internal skirts.

8. – The central section is similar to the Lotus 80, but the bodywork is somewhat different as it completely encloses the inclined gearbox.

9. – The small rear wing, inside the rear wheels, mounted on side plates, follows the bodywork line.

PROFILE

1. – If you look at the side shot of the Arrows A2, you can see that the air flow is divided in two thanks to small wings mounted on the front suspension.

2. – The rear end of these little wings ends in two smaller wings that can be altered to adjust the downforce at the front.

3. – A space between the front wings and the side pods which contain the radiators. The hot air from these radiators is fed out through separate channels as on the Ferrari T4 so as not to upset the two external airflows.

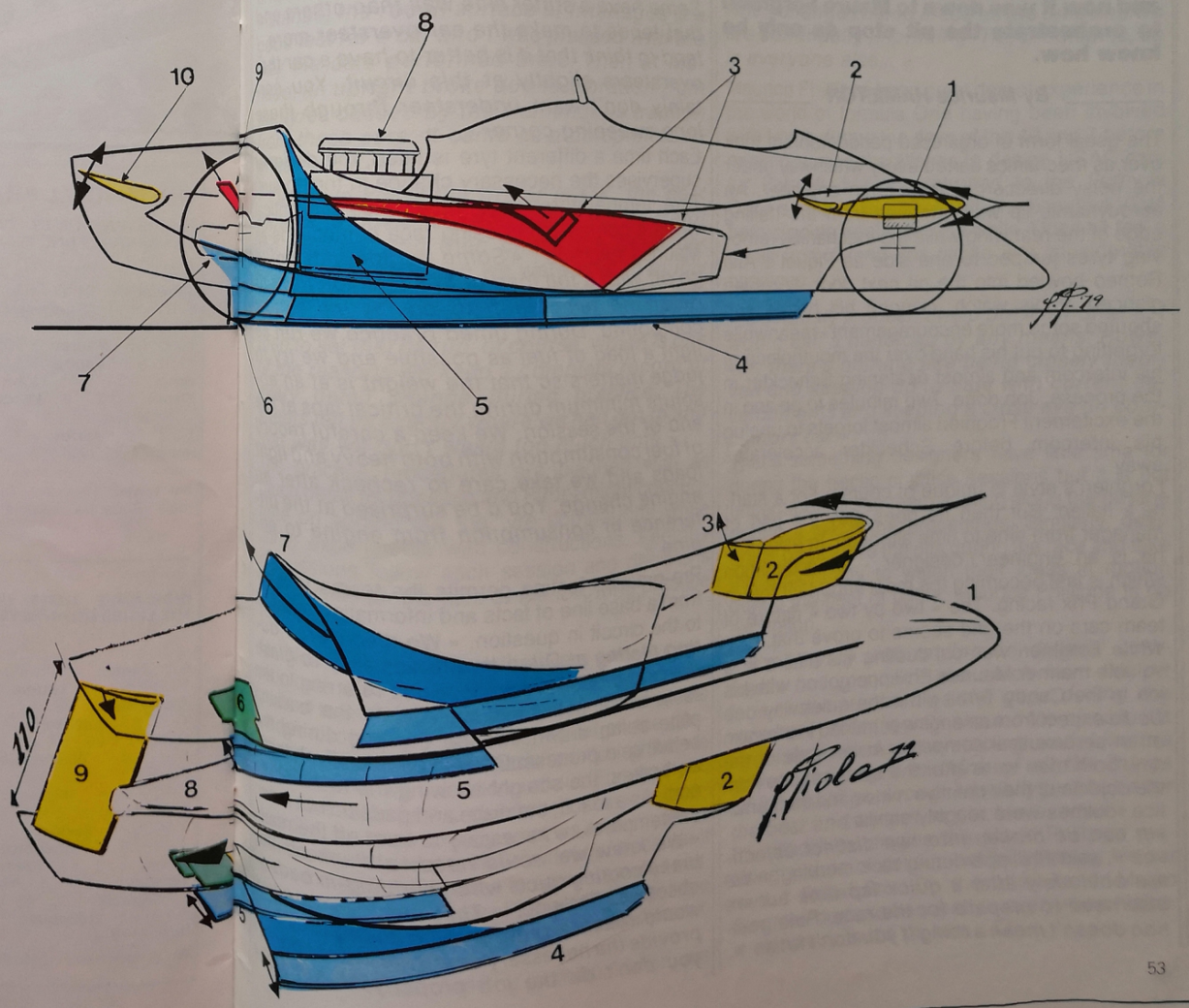
4. – Skirts along the bottom of the side pods, limited only by the wheels.

5. – The side pods are fitted with a double wing. The air extractors are separated by two small internal skirts (6, petticoats?) which channel the air towards the back of the car.

7. – The rear end of the car is completely enclosed as on the Lotus 80. The engine and gearbox are inclined downwards to wards the front (8).

9. – The exhausts are pointed upwards.

10. – The little rear wing between the side plates is 60 cms from the ground.



DESIGNERS AT DIJON

Four minutes to two and all was far from well. The renaults were reeling off quick times at the drop of a hat and Ferrari were in trouble. Jody Scheckter swept into the Dijon pit lane for another set of qualifiers in the hope of wringing a fast lap out of the dying minutes of practice. For the time being, he had done his bit and now it was down to Mauro Forghieri to orchestrate the pit stop as only he knew how.

By Maurice HAMILTON

The usual form of organised pandemonium took over as mechanics darted every whichway under the noisy direction of the Ferrari engineer. An aerodynamic lip was removed from the trailing edge of the rear wing while the mechanics removing tyres jumped to one side as Piquet's Alfa Romeo bowled into the pit next door. Forghieri glanced at his watch, clapped his hands and shouted some more encouragement - meanwhile forgetting to put his hand over the mouthpiece of his intercom and almost deafening Scheckter in the process. Job done. Two minutes to go and in the excitement Froghieri almost forgets to unplug his intercom before Scheckter accelerates away...

Forghieri's style is unique of course. For a start, he's Italian. But then he does play the part of manager from time to time although, in essence, he is an engineer / designer - an occupation which is fast becoming the most important role in Grand Prix racing. The « two by two » nature of team cars on the grid seems to prove that.

While Forghieri was conducting his affairs in a voluble manner Maurice Phillippe got on with his job in the Candy Tyrell pit in the quiet way one would expect from an engineer trained in the calm of an aeronautical company. At he ende of the day, both men were after the same results from the objects of their creative minds and their practice routines were roughly similar.

« It can be broken into two distinct objectives », said Phillippe during race morning. *« We are obviously after a quick lap time but we also need to prepare for the race. Pole position doesn't mean a thing if you don't finish ».*

Since the current tyre war broke out at the beginning of last year, teams spend a considerable amount of time choosing the tyre compound and construction to suit their car for the particular circuit. *« In a way, it's a bit of a gamble choosing a race tyre »*, says Phillippe. *« For instance, with Goodyear at Dijon we have two different types of compound in three constructions. Some have a stiffer side wall than others and that tends to make the car oversteer more. I tend to think that it is better to have a car that oversteers slightly at this circuit. You certainly don't want understeer through those long sweeping corner ».*

Each time a different tyre is fitted, the designer supervises the necessary change in trim to suit. Tyre temperatures and wear rates are critical when it comes to choosing race compounds as Maurice explains : *« Some compounds could go off with a full load of fuel and you have to resist the temptation to go for the softest compound. During timed practice we run as light a load of fuel as possible and we try to judge matters so that the weight is at an absolute minimum during the critical laps at the end of the session. We keep a careful record of fuel consumption with both heavy and light loads and we take care to recheck after an engine change. You'd be surprised at the difference in consumption from engine to engine ».*

Pre-practice testing permits the teams to work from a base line of facts and information relevant to the circuit in question. *« We discovered during testing at Dijon that it was easy to glaze the brake pads »* says Phillippe referring to the resin bonding the pad material to the backing plate being drawn through the pad during the bedding-in process. Dijon is comparatively easy on brakes, the straight allowing the materials to cool. As a result, the discs and pads do not reach the temperature necessary to burn off the resin. *« We knew we would need to blank off the brake cooling ducts when bedding-in bads »*, observed Phillippe. *« That way the brakes would reach a high enough temperature to provide the necessary coefficient of friction. If you don't do the job properly, it will cost another ten laps or so to bed in another set of pads and time is valuable during practice ».*

It was more than a simple brake problem which upset the Candy Tyrrell team's routine when Didier Pironi crashed during the final session. *« It's the sort of thing a designer dreads »*, reflected Phillippe. *« You can cover all the possibilities and then something can catch you out. For instance, the rough surface at Interlagos is a good test for a car and I was pleased with the way the cars performed there. Then at Monaco, an upright broke due to vibration from the tyres caused by the tremendous traction from these cars. It came as a complete surprise.*

« Once we know the driver is OK, the next thing is to obviously determine the cause of the accident and then check the other car immediately. At Dijon we were able to quicly ascertain what had happened and Didier was soon out in the spare car. The mechanics had then to set that car up, of course, which is one of the reasons we keep a complete record of every detail change during practice. The sheets tell us exactly where we had got to and that way we don't waste too much time ».

The practice procedures are planned with as much detail as possible and Pironi might concentrate on sorting out the tyre compounds while Jarier experiments with constructions. Lengthy discussions follow each session and decisions are reached for the race or the following practice period.

Maurice Phillippe finds both drivers easy to communicate with and the team have established a code of terminology that clearly defines the points under discussion « We have a brief on the description used for certain characteristics so that we all know what we are talking about. For example, when we refer to « understeer 3 » or « understeer 2 », we know exactly what we mean in terms of severity. We like to have a debrief because it gives the drivers a chance to compare notes and, as it happens, both Jean-Pierre and Didier have similar thoughts when it comes to aerodynamic and general balance ».

The fact that the lines of communication are working well is illustrated by the competition record of Tyrrell 9 : two third places ; one fourth ; one fifth and two sixth places. As might be expected though, Maurice Phillippe would like to see further improvement : *« Naturally, we would like to be at the forefront but I'm pleased with the way the car has progressed. Il may not always be apparent, but there are small changes being made all the time and we are continually improving. The problem is, so is everyone else... »*

Maurice Phillippe has a great deal of experience in the world of formula One having been involved with Lotus during the days of the 49 and 7 before moving across the atlantic to design USAC cars for Parnelli. Maurice returned to the Formula Once scene in late 1974 with the beautiful VPJ4 before going freelance for a while. Does he feel a break from Grand Prix racing is a considerable handicap ?

« Obviously it doesn't help but it is not what I would call a handicap by any means. However, there's nothing like being closely involved and keeping up to date with current developments and keeping a close eye on competitors'car ».

That's something designers have little time for during the hectic practice sessions but it is not uncommon to see them anbling along the pit lane during a lull in the procedings. Similarly, designers often leave the pits during the race and take the opportunity to watch their ideas in motion during the heat of battle. Maurice Phillippe is no exception.

« It's all very well relying on drivers' comments but you can't see much from the pit lane. I sometimes time the gaps during the race but I prefer to walk around the circuit. It's agonising when you are doing well. Like the driver, you begin to think of all the things which could go wrong. I usually just hope for the best and try not to get too excited ».

It's difficult to imagine the placid Phillippe reaching a state of delirium while watching his car lead a Grand Prix. On the other hand, Mauro Forghieri does so frequently - even when his car is stationary in the pti lane... □

VILLENEUVE-ARNOUX : « AN IDEAL RACE »

The race had been over for two hours. The paddock had been completely packed after Jabouille's triumph, but now there were just a few groups of fans wandering among the transporters, many of them already loaded up. The drivers could now venture from their caravans and motor-homes, there were somewhat less sought-after. That was the case of the Renault drivers, the real heros of the day. Gilles Villeneuve was also more free to roam the paddock, where he was staying as he had last year for most of the season. And while Jabouille tirelessly told the story of his race, and Villeneuve recalled the last thrilling laps of his race, a small group, with Rene Arnoux the central figure, crowded around the video-screen that Marlboro had in their hospitality pit.

by Mario LUINI

The film ? A punchy western whose title could be « For a few points more », or an epic mixing fiction with suspense called « Star Wars.. in cars ». The subject ? The legendary last three laps and the battle between Arnoux and Villeneuve.

The inforgiving duel, rearely, if ever, seen in Formula One, reveals the true personalities of the two drivers concerned : tough, stubborn, aggressive, brave and fabulously cunning driving their cars, but above all, completely fair, chivalrous, perhaps one can say, to the very limit during the battle. Those who have known Gilles and Rene for a long time won't have been at all surprised. Both of them, in everyday life, are straightforward, balanced. The little Quebec driver looks the determined man he so obviously is, but Nene has a softer look, full of modesty, even timid. But Nene proved himself to be a tiger on the track when he had to be. Millions of television viewers throughout the world saw their battle which was well-followed throughout by cameras which were for once well handled.

THE GOOD OLD DAYS

The video reel starts on the 76th lap with a superb shot : the two cars, telescoped by the lens, seem to be crawling up the straight, strange shimmering insects with big black feet. In five laps, Rene Arnoux has caught up, the yellow nose cone of the Renault under the Ferrari's rear wing.

The cameras follow the two cars, they are the sole subject. There's a coming together in the long righthander after the straight, then they dive down into the new section, there's the rising hairpin followed by the double apex left hander. The two cars slide incredibly through there under full acceleration, then down through another righthander, and then the long fast curve into the straight.

The Ferrari turns in early, goes over the kerb on the inside and slides right out to the outside of the track and the catch fencing. Gilles has to keep his second place. Behind him, the Renault is as quick, but uses less track. Of the four cars using Michelin tyres, Rene has started with the harder compound and he's had no problem with them throughout his drive through the field from ninth place and now the possibility of second place. Gilles, on the other hand, isn't so happy : *« from half distance, I felt as though I was driving on a skating rink, I had no grip, nothing, either in the corners, under braking or under acceleration. I was just sliding around, just the good the old days when I was racing skidoos. »*

« ON THE LIMIT »

It's three laps from the end ; they pass the pits. Rene is tucked in behind the Ferrari, he pulls out just before he brakes. But not quickly enough, it seems, to have a real advantage in the corner itself. Gilles doesn't give way and the two cars, wheel to wheel, go round the corner beside one another.

« Did you have engine trouble at that stage ? » someone asks Rene.

He comes out of a dream. It's as though he's having trouble believing what he's seeing ; perhaps it's slightly less real on a television screen than being in the car.

« Oh yes, I'd had trouble for at least eight laps. I seem to have lost revs. On the straight I didn't seem to lose too much speed, but without that, I could have forgotten Gilles, that's for sure ».

The next shot shows another stage of the duel, there's a coming together again, and this time Rene gets ahead to the cheers of the crowd. The curves allow him to pull away a little, but not as much as he would have liked.

« When we got to the straight, I thought he would pull out three or four lengths, » Gilles takes up the story. *« But no, he wasn't as fast as me at high speed, and when we came into the braking area, I was only four or five yards behind him. Furthermore, he stayed on the left of the track. II went for the gap... ».*

And how ! All four wheels locked up having left his braking to the last possible fraction of a second, Villeneuve, using an acute sense of balance, threw up clouds of blue smoke as he went for the corner beside the yellow car. *« I was right on the limit »,* he said with an amused look on his face.

« ON THE MARBLES »

« You should have stayed on the inside », one of Arnoux's friends remarked, *« that way he couldn't have got by you ».*

« I couldn't », replied Nene, *« my engine wasn't going too well there, it was too risky doing that, I had to stay on the ideal line ».*

The two cars were side by side again as they went through the corner. Wheels banged, the crowd around the video gasped.

« Wait, that's nothing... » laughed Rene.

The Renault was in front, thanks to its better road-holding, but the Ferrari came back at him and again they touched and this time Rene couldn't help but take to the side of the track.

« I tried to keep my foot down so as not to be help up », explained Rene. The Renault crossed the track and all four wheels went onto the gravel.

« Arnoux had to lift off then and I was able to get by but only after I'd put all four wheels on the dirt as well, » said the Ferrari driver. *« But on the next lefthander, there he was beside me again. »*

« My tyres had picked up gravel which was stuck in the hot rubber. It was like driving on marbles, » explained Arnoux. *« I was all over the place, and going down into the lefthander, all four wheels slid. »*

On the screen we watched the two cars. The yellow one slid into the wheels of the red car and that went into a slide , magnificently brought under control, but that meant that the two cars came together again 50 yards further one.

« You touched three times », someone yelled.

« Oh, it was more than that, » smiled Rene, *« much more than that. It's just as well Renaults and Ferraris are strong. »*

« You're mad » Nelly Arnoux said quietly to her husband, her first remark.

« Well » said Rene after a few moments silence, *« I wouldn't necessarily do that every Sunday, »* and he burst out laughing at the thought of this amazing duel.

« THAT'S RACING »

On the screen, it was all over. The Renault's engine, losing power - *« without doubt it was dust in the filter » - meant that Rene couldn't catch the Ferrari before the chequered flag.*

« There are times when I realise that I'm much better off working in the pits than watching the television, » Joan Villeneuve talking, without thinking less of her husband's dialogue. It seems that for Gilles the battle was more important than it was for Rene. With a second place, there was a greater chance of the World Championship.

« A third place wouldn't have been worth much. I don't need four points here, three there, I need wins or second places. And those are worth a few risks. But Rene drove well, even though we did bang wheels on a few occasions. We were never really in danger though... well, perhaps once when I thought one of us was going over, but it didn't happen, thank heavens, » and Gilles folded his arms, an impassive look on his face. You're either a fatalist or you're not.

« All the same, if I had to do it again, I would... anyway, it was fun... at least, I thought so. That's racing. » He smiled, a satisfied smile.

Two real fighters.□

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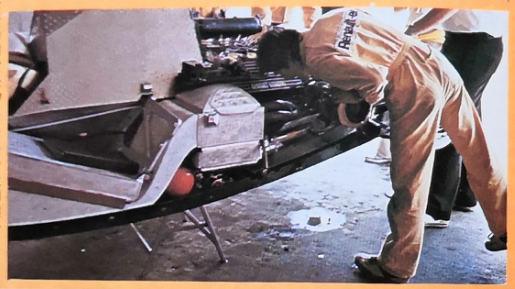
RENAULT-ELF

Renault RS 11 :
Jean-Pierre Jabouille (F)
Renault RS 12 :
Rene Arnoux (F)
Renault RS 10 :
spare.

There were no important modifications on the Renaults since their first appearance with double turbos at Monaco, apart from a larger air box for the heat exchanger, and a redesign of the wheel balancing. A third chassis had been completed, RS12 so RS10 became the spare. Jean-Pierre Jabouille tested both car and himself at the circuit the week before the Grand Prix, but the twisty nature of the circuit caused him to stop early. Jean-Pierre Moreau, the Equipe de France masseur, gave him a course of weight-lifting in order to improve his arm and neck muscles.
The Renaults flew in practice, and very early on, Jabouille got pole position with Arnoux an excellent second fastest. The latter had a valve spring break during the Saturday morning untimed session, and didn't take part in the afternoon session. He may have been worried about his position on the front row, but he need not fear. He had 20 hundredths in hand over Villeneuve. With such times during practice, the yellow cars' drivers could dream of victory. Jabouille was masterful, and drove an unhesitating race, overtaking Villeneuve on the 46 th lap under braking (and the Canadian is an expert at that sort of thing). An easy victory « *I had a lot of trouble with cramp, and my helmet as well* », he admitted after the race, absolutely exhausted. Rene Arnoux drove an intelligent race, building up his confidence to the moment that he knew that he could take second place off Villeneuve. « *We fought over it like crazy, banging wheels frequently. Unfortunately fuel trouble prevented me from staying in front. I think there was some dirt in the system which upset the fuel feed* ». Strangely enough, Rene used a different compound tyre to the type used by Jabouille, and there seemed to be little deterioration in either tyre at the end of the race.



FERRARI SEFAC

Ferrari 312 T4 /040 :
Jody Scheckter (ZA)
Ferrari 312 T4 / 041 :
Gilles Villeneuve (CDN)
Ferrari 312 T4 /037 :
spare.

Thanks to the cancellation of the Swedish Grand Prix, the Scuderia were able to do a lot of private testing. The T4s that turned up didn't have the inclined engines (as had the Arrows) but a lot of small modifications : among them was the use of carbon fibre wich lightened certain parts, thinner wings specially made for use on fast circuits, and suspension adjusted slightly differently for the cambered corners which the Ferraris didn't like too much. Scheckter and Villeneuve also had a couple of private test sessions with Michelin. The first was glad to get back to driving again after such a long holiday ; the second got rather bored with the short but fast circuit.
For the Dijon circuit, Forghieri had set up the cars unusually, sacrificing a little fast corner roadholding for greater straight line speed.
Despite a fairly careful pace at the start, Scheckter quickly ruined his tyres. On the other hand, Villeneuve went off like a rocket and ruined his that way, even though he resisted the Renault for a number of laps before having to let the yellow car past.
Will there be a T4 A at Silverstone ? « *Yes, if we can establish the exact advantage it will give us* », explained Forghieri.

SAUDIA WILLIAMS

Williams-Ford 07 / 03 :
Alan Jones (AUS)
Williams-Ford 07 /02 :
Clay Regazzoni (CH)
Williams-Ford 07 /01 :
spare.

If one had to bet on a potential winner, Jones would have the greatest amount of money on him. He set a splendid 1'07"99 during the final session, but he was only credited with a 1'08"23 because the faster time was set when the yellow flags were being shown because of Pironi's accident.
Neither of the Williams cars were modified in any way following Monaco. Their manœuvrability and top speed would appear to be one of their advantages in Dijon. But they seemed to lack downforce and they were too susceptible to a change of aerodynamics. There were two more problems with the 07s : they were sensitive to engine overheating, and the brakes overheated too. During practice, Jones's engine went while he was in the pits, and the brakes caught fire. Nevertheless, Alan was the fastest Cosworth runner. The race, during which, of course, the lap times were slower than in practice, confirmed that Williams have finally found reliability, both Regazzoni and Jones finishing in the points.

CANDY-TYRRELL

Tyrrell-Ford 009 /4 :
Didier Pironi (F)
Tyrrel-Ford 009 / 03 :
Jean-Pierre Jarier (F)
Tyrrell-Ford 009 /01 :
spare.

It was a weekend to forget perhaps for Ken Tyrrell, but certainly for Pironi. Certainly the Tyrrells have shown themselves to be difficult to set up at each race, sensitive to bumps, and are rather susceptibles to losing wheels. After South Africa and Spain, it happened again in France. On Saturday afternoon, during the last timed session, Didier was in the last fast righthander before the pits, cornering at around 140 mph when the car lurched, crossed the track, knocked down three rows of catch fencing and hit the barrier. In the meantime, the left rear wheel disappeared. On his return to the pits, Didier couldn't really explain the cause of the accident. It seemed to him that the rear suspension collapsed and then the rear wheel flew off. On the other hand, the track marshals thought the rear wheel cam off first. In fact it is very difficult to establish what exactly happened. Once again, Didier got out of a wreck unhurt, after another mechanical failure which could have had grave consequences. The monocoque was almost torn in two.
As usual, the two Tyrrell drivers were only 15 hundredths apart on the starting grid after braking problems and skirts that were wearing out. During the first session Jarier went off the track but only lighty damaged a side pod and skirt.
Didier was somewhat downcast following his accident the previous afternnon, and he stopped on the 44 th lap to change tyres, and then on the 77 th lap to check his rear suspension on the spare car he was using. He was very unhappy and retired. Jarier had to give best to Lauda, Jones and Jarier, but then drove steadily to a good fifth place thanks to Scheckter's pit stop and Piquet's retirement.
After the chequered flag, Jarier pointed out to Tyrrell the state of his left tyres : the front one was in very bad state, and the rear one was nearly flat and chunked. The race had finished just in time.
Neither of the 009s had been modified since Monaco. However, the drivers said they preferred the older side pods with the high fins running along the pods. As for their new and revolutionary rear suspension, Maurice Phillippe suggested we be at Silverstone...

LIGIER GITANES

Ligier-Ford JS 11 / 04 :
Jacques Laffite (F)
Ligier-Ford JS 11/01 :
Jacky Ickx (B)
Ligier-Ford JS 11 / 03 :
spare.

For the French team, so eager to carry off the World Championship, their home Grand Prix was a sober affair. However, they put on a show, if only by the standard of their cuisine in the paddock.
Three JS 11s were brought to the circuit, slightly altered in terms of aerodynamics and suspension. Fins had been mounted on the side pods to channel the air towards the back and an unturbulent area behind the exhaust system ; lateral fins to channel air towards the rear wing were also tried, but discarded for the race.
From the start, the two Ligiers seemed inefficient on a circuit which should have suited them. What had happened ? They'd tested on the circuit earlier and their handling had seemed perfect on the tyres used. Yes at first, the tyres used at Dijon didn't seem to suit them. Furthermore, it must be admitted that Laffite's job was not an easy one, swopping from one car to another after each session. In these conditions, he had to give 150 per cent to each chassis, not easy.
Laffite couldn't sort out the handling, and could only take a relatively modest grid position. *« I've been up against it the whole time »*, said Jacques, *« and nothing's improved. Anyway, it's a lot better for my brother-in-law, I'm really happy for him ».*

Ickx's weekend, as second driver, was somewhat less hectic, for he couldn't keep swopping cars like his team captain. *« But we haven't been able to iron out a violent understeer which loses me time at the turning-in point of each corner »*. Jacky was confident for the race, and thought he could help out Jacques, but during the warming-up lap, he made an error which was disastrous : instead of changing up from third to fourth gear, he went down to second. On cold tyres, locking up the rear wheels had a disastrous effect and the car slid into the guard rail. Jacky got back to the pits quickly enough where the spare was prepared, but without his seat nor helmet restraint fitted. The tyres were fitted, a tardy start while precious seconds were lost. Finally, Ligier number 25 took its place on the grid. At that moment, a Clerk of the Course's messenger arrived to say that he car should be sent back to the pits because it had had to be puschedthrough te metal barriers closing off the pits. Not surprisingly, Guy Ligier went mad at this hasty decision. Peter Warr arrived and calmed him down, and the decision was found to be unjustified anyway. After this discussion and the fitting of his seat, which arrived by ambulance, Ickx was able to start. He had two stops to change first the front and then the rear tyres, but the understeer persisted. Finally he retired with a broken engine.

OLYMPUS-WOLF

Wolf-Ford WR 8 :
Keke Rosberg (SF)
Wolf-Ford WR 7 :
spare.

There was a certain wind of serious change in the Wolf team, for good reason. Bad results, which is all the team could show for the first half of the season, are hard to bear when one is a millionaire and ambitious.
During the weekend, Keke Rosberg was at pains to do his best so that his new team wouldn't be disappointed in him. On the eve of the Grand Prix, Peter Warr professed himself to be well satisfied : *« after a few laps of unofficial practice at Silverstone and at Dijon, Keke was quicker than Hunt in the same car. He's surprisingly forceful and very analytical. I think we should get some results now »*. The Wolf team had been busy in June, not only settling in their new driver, but also building up a new car, identical to the current car. *« We don't think that the basic conception of the Wolf WR 7/ 8 is wrong, but on the other hand, we've got problems with understeer and lack of balance in corners. Is it a front suspension problem or aerodynamic ? I must say that I'm pleased the way in which Keke is working on the problem »*. It must be said that the Wolf team, like Lotus were surprised at how competitive the Ligier, Williams and Tyrell teams were at Dijon.
They tried the car without front fins without any great result. During the final session, Keke suddenly suffered a large oil leak, which was fortunately only a nut that was loose on top of the geatbox. For the race, the side pods were fitted with fins wich puschedthe air back towards the rear wing.
For the moment, Keke's contract lasts only until the end of 1979, but possible extension of this into 1980 will be discussed during the next few races.

TEAM REBAQUE

Lotus-Ford 79 / ML 19 :
Hector Rebaque (MEX)
Lotus-Ford 78 / 4 :
spare.

After their disagreement with the Monaco arrangements, the Rebaque team and their truck were back in the paddock again. Even though sometimes he's scarcely noticed, the young Mexican sometimes puts together some good races. There's the following question to be asked : is he an average driver using excellent material, or a good driver using a formerly excellent car when it was in Chapman's hands ? Certainly the selling of the cars by Lotus doesn't include any technical assistance. His 79 hasn't developed at all, and the question needs an answer. Rebaque battled with irregular road holding which a change of springs didn't alter. His side skirts didn't work well either. He finished twelfth on the same lap as Tambay.

WARSTEINER-ARROWS

Arrows-Ford A2 / 1 :
Riccardo Patrese (I)
Arrows-Ford A2 /2 :
Jochen Mass (D)
Arrows-Ford A1 / 03 :
spare.

A third generation of single seater saw light of day with the new Arrows which turned up mainly to get some mileage. Early on Friday, Patrese and Mass complained of poor hadling, insufficient downforce and water and oil temperatures that were too high. A change of springs, adjustement pouring of water over the entire back end of the car, made it little more efficient. Mass stopped out on the track during the third timed session when the oil pressure dropped, and he took over the spare car. In fact it was nothing but a lack of oil in the sump. They qualified the two cars on the tenth and eleventh rows.
Faced with the crucial problem of lack of air to the engine, clutch and gearbox, Southgate took off the all-enveloping rear bodywork of the A2 and fitted six cooling pipes and some little spoilers on the side pods to channel the air flow onto the rear wing.
At the end of the race, Mass's left onter skirt was badly damaged, but he decided not to lose time in the pits. It's worth noting that the two drivers weren't so affected by the considerable G-forces that many of the other drivers were suffering thanks to fittings to the monocoque which supported their shoulders.

SAMSON SHADOW

Shadow-Ford DN / 38 :
Elio De Angelis (I)
Shadow-Ford DN9 / 2B :
Jan Lammers (NL)
Shadow-Ford DN4B / 5B :
spares.

When you don't have Goodyear's best, it's hard to put in a brilliant performance. But that's not the reason for everything. The cars are out of date, and the financial means are limited. Hoping for better, De Angelis drove a quiet race, having been unable to balance his car to his style.
Lammers qualified better (between Tambay and Mass) but suffered fuel trouble early in the race. On leaving the pits, he couldn't get first gear and had to be pushed and take second instead. The chinmeys for air extraction had disappeared incidently.

MARLBORO TEAM MCLAREN

McLaren-Ford M 28 / 3c :
John Watson (IRL)
McLaren-Ford M 28 / 2 C :
Patrick Tambay (F)
McLaren-Ford M 26 / 15 :
spare.

After a waiting, if profitable race at Monaco, John Watson was back in his M 28 / 3C. Unfortunately, he couldn't get pick up points this time due to retirements. The M28 is still slow, heavy and not very manaeuvrable and needs to be replaced as soon as possible. The side pods had been trimed by 3 cms, the nose fins had been mounted further forward, and the rear suspension had been revised to remove it from the air flow... but it didn't do much good. Patrick Tambay had a C type as well, but couldn't do better than his teammate.
At the end of the untimed morning practice on Saturday, Patrick's engine went. His mechanics decided to change it for the afternoon timed session. Fortunately the session was stopped because of Pironi's accident and that allowed Tambay to take part in the second part of the session.
The M29 should appear at Silverstone. *« It's going to be a car made of aluminium alloy and not of a honey-comb structure »*, said Tambay unenthusiastically. *« It will have a single, centrally mounted fuel cell. It should be a very narrow and light car. Marlboro are sponsoring the British Grand Prix and John will almost certainly have his car there. I don't know about mine. There's still, unfortunately, a number of differences between our cars ».*

MARTINI RACING TEAM LOTUS

Lotus-Ford 80 / 1 :
Mario Andretti (USA)
Lotus-Ford 80 / 2 :
Andretti's space
Lotus-Ford 79 / ML 22 :
Carlos Reutemann (RA).

Years go by aren't necessarly alike. But just one hundredth of a second, the reigning World Champion managed to qualify faster than his teammate in the 79. His problems ? *« Tyres, suspension, aerodynamics, I don't know, »* he tried to explain. For three days Andretti suffered. Changing from one chassis to another didn't help. Colin Chapman hoped that the 80 / 2 would be better balanced, better handling and more efficient.*« We did a few laps testing at Silverstone and it was disastrous. »*
On the newer model, smaller front fins, different suspension geometry and a large rear wing between the side plates did nothing to improve things. Reutemann's 79 had been fitted with various different front suspension set-ups for Dijon. Bennett hadn't been entrusted with a Lotus 80 for Reutemann because Chapman decided it wasn't competitive enough. The Lotus team had their problems during the race too. Andretti stopped for the first time with the front right brake pipe broken. They decided on retirement, but the mechanics repaired it and Andretti went out again. A few laps later, he retired when the handling became inexplicably unpredictable.
Reutemann changed tyres once and then had a slight collision with Rosberg which punctured his front right tyre and he went off the road. With its front suspension splayed, the Lotus 79 closed an unhappy weekend for the English team.

Cockpits

AUTODELTA

Alfa-Romeo Boxer A1 / 177 01 :
Bruno Giacomelli (1)

After giving Monaco a miss, the Italian team were back at Dijon, *« training the team, and working out certain systems, »* as designer Marelli put it, the man responsible for the car. The wheelbase had been increased by 15cms, a bulbous nose and new rear bodywork were the main changes. It's still a semi-wing-car, and it could perhaps do well as its Belgian appearance had showed. But practice at Dijon didn't confirm the promise shown during private testing at Balocco. The bulbous nose was soon replaced by the older nose with side fins. Starting from the ninth row beside Fittipaldi, Giacomelli had a certain amount of gear selection difficulty. One pit stop didn't help. Another stop to change tyres lost him a total of five laps.

COPERSUCAR-FITTIPALDI

Copersucar-Ford FW 5A / 1 :
Emerson Fittipaldi (BR).

The FW 6 is still not ready. Caliri must have a lot of worl to do. Fittipaldi is still a fiery driver fortunately, and the three sessions proved it as he quietly got his times down : 1'12"90, 1'11"12, 1'10"61. A little development is taking place on the current car, but most is going on the former Concorde car. On the 54th lap, Emerson's engine broke when he was in 13th place.

TEAM MERZARIO

Merzario-Ford A2 / 03 :
Arturo Merzario (I).

Barve little Art is still technically unready to qualify : *« tyres, the rear suspension, various things aren't right. »* He's short of money and a designer too. Arturo did his practice laps three at a time, coming into the pits, checking his gearbox, making adjustments and going out again. It's not easy to qualify well that way. He didn't qualify at all : 2"75 slower than Rebaque, the last qualifier after Stuck had pulled out.

ATS WHEELS

ATS-Ford D2 / 03 :
Hans Stuck (D)
ATS-Ford D2 / 02 :
spare.

The relatively recent arrival of Nigel Stroud as resident designer is beginning to make itself felt : the weight has come down by some 20 kilos just be lightening the bodywork and using titanium parts. The monocoque had been changed slightly to accomodate the driver's elbows and new side pods were tested with high fins running the lenght of the them a la Tyrrell at Monaco. *« We're working on a much more rigid monocoque. It was meant to appear here but we're a little late with it, »* said Fred Opert. It seems that it's very similar to that of the Williams. Stuck set the 19th fastest time on Friday, but couldn't improve it thanks to his qualifying tyres. On Sunday ? Well, the team were back at home.

TEAM ENSIGN

Ensign-Ford MN 179 :
Patrick Gaillard (F)

Gaillard got the drive after some competition with Needell, but the English driver didn't have the right licence. *« Nunn had my name on his list, but he wanted the English driver because he reckoned there were too many Frenchmen in Formula One already, »* explained Patrick. The 179 had scarcely developed at all since its non-qualification in Monaco, but was modified on the Friday / Saturday night, particularly the front suspension. It was important to modify it, for the car went from dramatic understeer to slight oversteer. The 1"50 gazined was insufficient to get onto the grid. The physical strain imposed by the Dijon circuit meant that Gaillard couldn't find much of a difference between Formula One and Two *« apart from heavier steering which weighs on the arms ».* As to his driver's status, Patrick was under no illusions : *« if I had to chose between a good Formula Two team and an unsuccessful one in Formula One, I'd settle for the former, but that's not the case. Currently, I'd prefer to drive in Formula One. »* Mo Nunn has suggested that he might do some more races, but nothing has been signed yet.

BRABHAM PARMALAT

Brabham-Alfa Romeo VT 48 / 2 :
Niki Lauda (A)
Brabham-Alfa Romeo BT 48 / 3 :
Nelson Piquet (BR)
Brabham-Alfa Romeo BT 48 / 4 :
spares.

Lauda retired on the 24th lap after a double spin (his engine stalled). Piquet retired on the 53rd lap after he went off the road. Lauda was never very happy with his 48 - 2 : *« understeer, understeer, »* he kept saying. As if to prove it, young Piquet was faster in the first two timed practice sessions. Different side pod openings were tried afternoon after he slid rather unexpectedly. A second accident, but this time during the race, cost him a splendid fourth place 27 laps from the end.

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